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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

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JUNE, 1941

Vol. 94, No. 6

$10,000,000 Fire Which Destroyed a Stockyard and a Grain Elevator in Jersey City, N. J. New York City Sent Fireboats to Aid.

A CASE SHEPPERD MANN PUBLICATION

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THAT'S A SIMPLE FACT that all fleets in emergency service have been facing—and that's why more and more fire departments are equipping with B. F. Goodrich Seal-o-matics.

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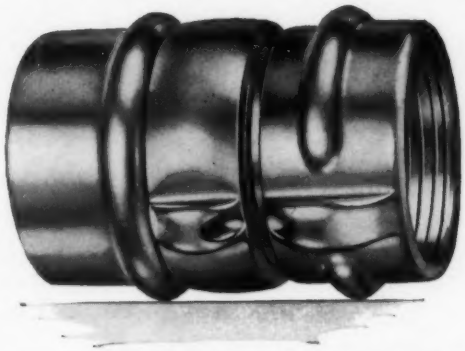

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SECOND PRIZE $50.00

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It is such a simple thing added to a hose coupling! Yet the NEW thread protecting feature added to the Akron Drop Forged Coupling is the most outstanding improvement in coupling design for many, many years. The coupling is drop forged with protective bands around the male and female parts as clearly shown in the illustration.

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As a drop forging, this coupling has the desirable physical characteristics of all drop forgings, namely, toughness and density; 30 to 50% greater tensile strength than the cast bronze ordinarily used in couplings.

Here you have a combination of five outstanding and desirable values in a coupling:

First—Protector Bands—protect at all times.

Second—Drop Forging—uniformity and high tensile strength.

Third—Rocker Lug—enough said!

Fourth—Tapered Still Thread—free swiveling.

Fifth—Higbee Thread Indicator—instant thread engagement.

Akron Drop Forged Couplings with protectors are approved by Underwriters' Laboratories, Inc.

Check and double check on these points of merit of the Akron Protected Coupling, then name it! THAT FIRST PRIZE MAY BE YOURS!

FOLLOW THESE EASY RULES

1 Submit one, or as many names as you like, in describing this protected thread and swivel coupling. Trick names desirable.

2 Draw an outline of coupling and write not more than 50 words describing advantages of this coupling.

3 Print your name, address and Fire Department or fire fighting connection. Send in your suggestions on a sheet of paper, written on one side only.

4 Contest closes June 30, 1941. Only entries postmarked on or before that date will be accepted.

5 Judges will be guided by general suitability of words for advertising and identification purposes. Judges' decision will be final. Entries, contents and ideas therein become the property of Akron Brass. In case of ties, duplicate prizes will be awarded.

6 Any resident of the United States, over 18 years of age, may compete if he is actively engaged in fire fighting and is identified with a municipal fire department, volunteer fire department or other fire fighting organization. Employees of Akron Brass, its advertising counsel, or any individuals engaged in the manufacture, sale or distribution of fire fighting equipment, or their families, are not eligible to compete. Contest subject to all Federal and State Regulations.

7 Prize winners will be notified individually by wire, and formal announcement will be made.

8 Judges for the contest are:
Jay W. Stevens, Exec. Secy. Intl. Assn. of Fire Chiefs, San Francisco, Calif.
Selden B. Allen, Chief of Fire Dept., Brookline, Mass.
George J. Richardson, Secy. Intl. Assn. of Fire Fighters, Washington, D. C.
D. W. Brosnan, Chief of Fire Dept., Albany, Georgia.

AKRON BRASS MFG. COMPANY, INC. WOOSTER, OHIO

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FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

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FRED SHEPPERD
Editor
N. N. WOLPERT, *Assistant Editor*

Nerve Is Needed!

THESE are days when it is well to recall a keen phrase of Grantland Rice's:

"There's a big difference between nerve and nerves!"

- The fire service is noted for its nerve. Let's do our part to keep the country from getting jittery and developing "nerves" instead of nerve in handling the problems of the hour.
- Unfortunately, there seems to be too little understanding of the seriousness of this country's situation, too much feeling that we are somehow insulated against the economic as well as the military onslaughts of a ruthless conqueror.
- (You need the fingers of more than your two hands to count the independent nations already destroyed because they kept "hoping" until it was too late.)
- But, come what may, we know that the sound common sense, the bravery—the nerve—of the fire service can be counted upon always.

The Publishers

FIRE ENGINEERING

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Many chiefs have written us asking if the B-E EVACUATOR can be used in narrow alleys. The answer is emphatically YES! It can be held laterally, very close to the building without impairing its efficiency.

IF YOU CAN RAISE A LADDER—
YOU CAN USE AN EVACUATOR!

Easily carried up a ladder by any fireman, the EVACUATOR can be attached to any window and most roof parapets. Note the scene in the picture on the left: — A congested, narrow alley with wires criss-crossing and very little space. Yet, with the B-E EVACUATOR held by only two men, any number of persons can be rescued with ABSOLUTE SAFETY — just as SAFELY and QUICKLY as in streets where ample space is available.

REMEMBER—the first duty of a fire department is to save lives —the B-E EVACUATOR WILL AID YOU IN THAT DUTY!

Two models are offered—the B-E EVACUATOR for use with ground ladders shown in picture at left. The B-E EVACUATOR for use with aerial ladders.

The B-E EVACUATOR IS ABSOLUTELY SAFE in its construction. FIRE AND WATER PROOF, compact and durable, it is made of Chrome-Molybdenum steel tubing — gas welded — cadmium plated to prevent corrosion. The fabric is fire and water proof—ALL FOR ABSOLUTE SAFETY!

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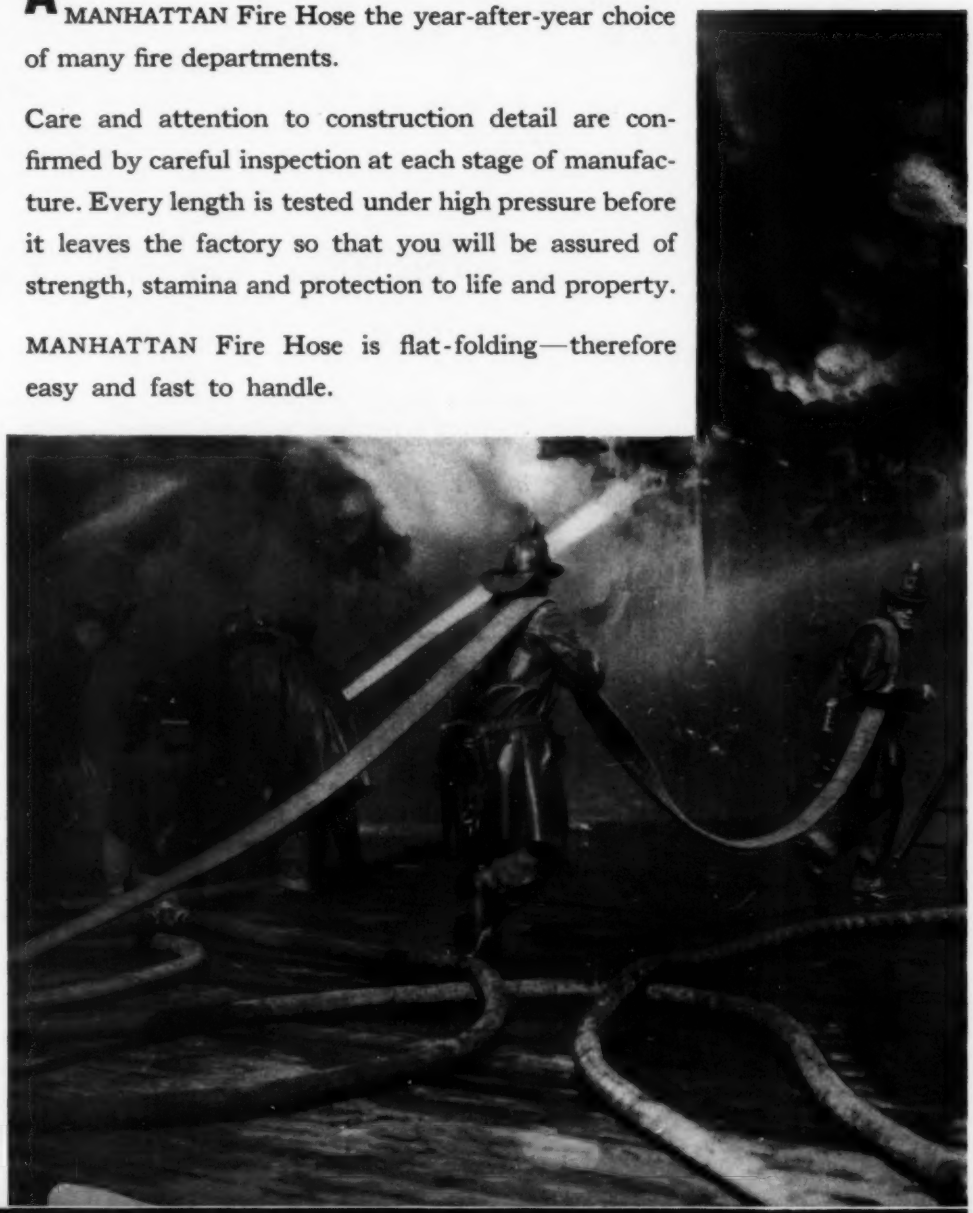
MANHATTAN Fire Hose is flat-folding—therefore easy and fast to handle.



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—easier to handle

Every Length Pressure Tested

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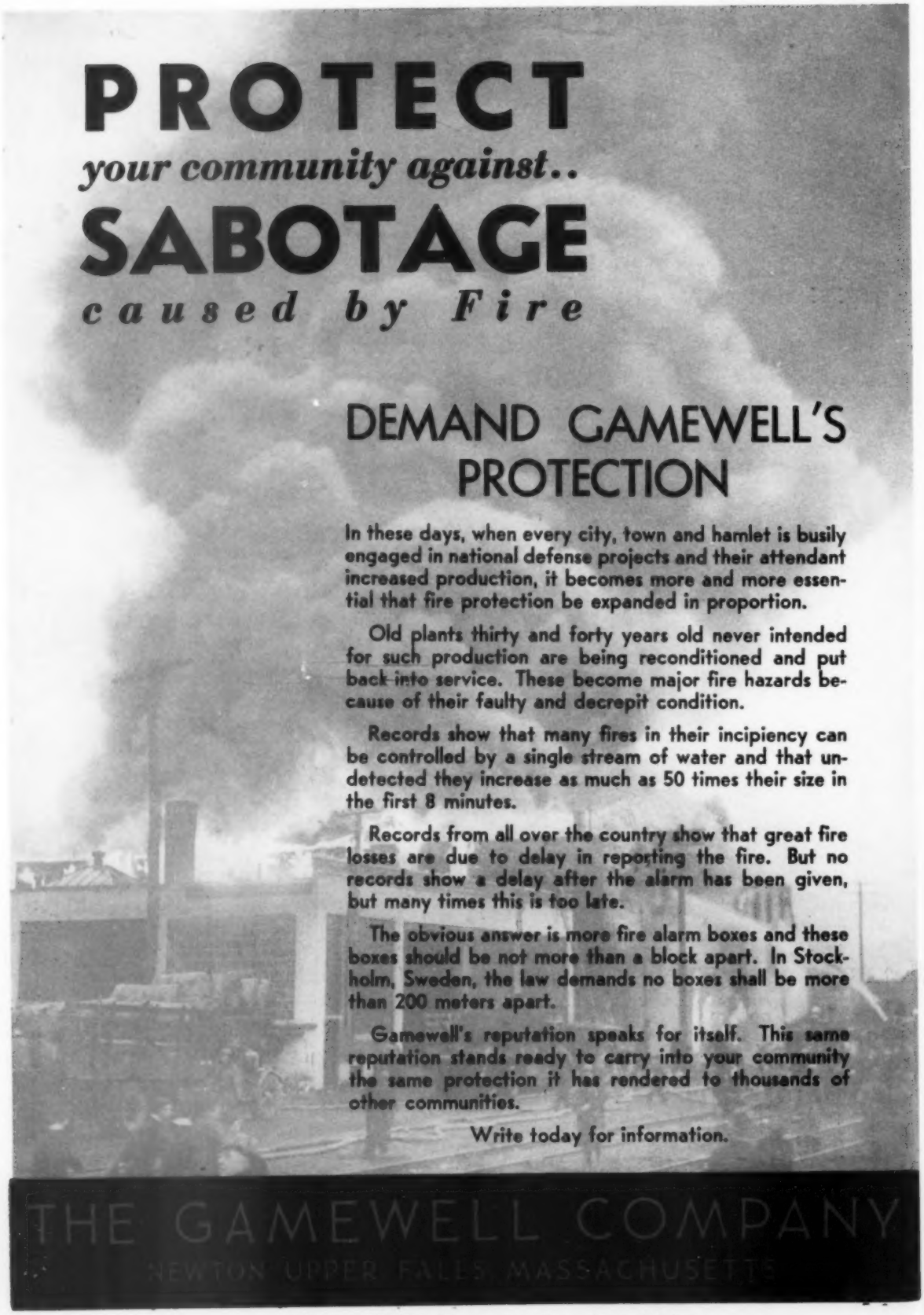
PROTECT
your community against..
SABOTAGE
caused by Fire
DEMAND GAMEWELL'S PROTECTION
In these days, when every city, town and hamlet is busily engaged in national defense projects and their attendant increased production, it becomes more and more essential that fire protection be expanded in proportion.
Old plants thirty and forty years old never intended for such production are being reconditioned and put back into service. These become major fire hazards because of their faulty and decrepit condition.
Records show that many fires in their incipiency can be controlled by a single stream of water and that undetected they increase as much as 50 times their size in the first 8 minutes.
Records from all over the country show that great fire losses are due to delay in reporting the fire. But no records show a delay after the alarm has been given, but many times this is too late.
The obvious answer is more fire alarm boxes and these boxes should be not more than a block apart. In Stockholm, Sweden, the law demands no boxes shall be more than 200 meters apart.
Gamewell's reputation speaks for itself. This same reputation stands ready to carry into your community the same protection it has rendered to thousands of other communities.
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JUNE, 1941

FIRE ENGINEERING

VOL. 94, NO. 6

With the Editor

Defense Councils— Political or Practical In connection with the organization of local defense councils throughout the country, two developments are taking place which will prove disastrous if permitted to spread: The first, making of political capital by penny politicians who have gotten themselves into the picture locally; the second, using the office of the local defense council to lobby for war materials orders rather than to develop a defense organization.

It seems that every small-time politician is endeavoring to get into the defense picture and to exploit it for his personal ballyhoo.

There's lots of publicity in connection with defense these days and a lot of personal advertising at no cost to the politician who can get into the movement. And a lot of them are doing just this, to the detriment of a sound, efficient defense program.

And as for the business minded defense councils, it might be said to their credit that they openly admit they are not concerned about defense locally, but are only interested in getting their share of war orders for local plants. So no defense work can be expected from them.

In both cases probably the greatest error is made in not assigning an important place to the local Fire Chief. In numerous instances the Chief was not even contacted, while in other cases he was only added as a member of a large group which included everybody from the butcher to the candlestick maker.

Civil defense abroad has shown that ninety per cent of the work falls on the fire service. Civil defense in modern warfare is largely fire defense. In view of this condition, it seems to us that the Fire Chief should hold a high position in local defense councils.

If there is danger of air attack, let's have committees that are qualified and that will produce results. If there is no danger, then the committees should be disbanded. There's no place for political climbers or business seekers in any defense program.

Fred Sheppard

Fog—a Versatile Agent

By B. W. MULCAHY

WITH the invention of the fog nozzle, the department received a tool which is effective in spreading a smaller volume of water over a larger area in the form of a fine spray. While its use is limited because of its lack of range and power of penetration, there are many fires at which such a stream has a distinct advantage over a more powerful stream from a straight nozzle.

Fighting an Oil Fire with Fog

The fog or spray nozzle as it is called, may be roughly divided into two classes.

1—Those with a high velocity spray
2—Those with a low velocity spray

The fog or spray nozzle has been adopted by many Departments throughout the country as regular equipment and has been found of great value in the following:

1. Oil or grease fires
2. Electric fires
3. Ammonia and chlorine leaks
4. Fires involving dusts
5. Dissinating smoke and gases
6. Single room fires
7. Attic fires
8. Basement fires
9. Clothes closet fires
10. Dissipating heat

These nozzles have been found particularly adapted to combating fires in volatile and flammable liquids that have not reached an advanced stage. They are extremely valuable for fires in heavy oils such as, motor and fuel oils and are very effective on fires involving fats and greases.

Their extinguishing effects on light volatile liquids such as gasoline and alcohol is that of cooling. The advantage they have over a straight-nozzle in accomplishing this is that they cover the surface, thereby striking all of the fire at the same time and preventing any back flash. The water is in the form of a heavy spray and is vaporized at the surface of the burning liquid and does not sink to the bottom and cause an overflow. It is the vapors of volatile liquids that are burning, and the fine spray from a fog nozzle dilutes these vapors and cuts off the fuel supply. They also tend to cool the liquid below its flash point and prevent the vapors from forming.

With the heavier oils and greases, which are not miscible with water, the spray from a fog nozzle forms an emulsion covering the surface and cuts off the air supply. While the emulsifying action is transient, it is usually of sufficient duration to extinguish the fire.

Oil and grease fires in large storage tanks which have reached an advanced stage can not as a rule be extinguished by the use of fog. For this type of fire, foam is the best extinguishing agent. No stream from a fog nozzle should be applied simultaneously with the foam. The water dilutes the foam and the strong spray breaks it up and prevents a blanket from forming. When using foam, the streams from fog nozzles should be applied to the outside of the tank to cool it and prevent its rupture.

Where a spray nozzle has been used to extinguish a fire in flammable liquids or oils inside a building, care must be exercised in sending men inside to investigate, as there is the chance that there may be a reflash from some glowing sparks, embers, or a hot metal surface.

Fog Nozzles and Electric Fires

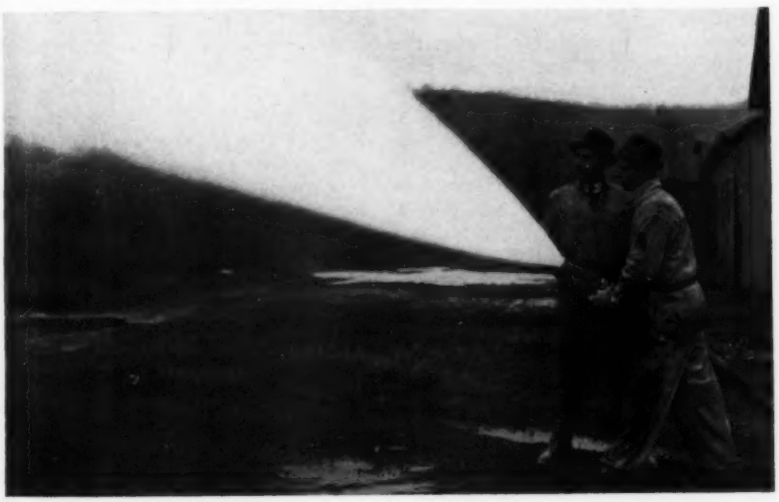
The hazards of electric fires include the danger to firemen of shock and the damage to the electrical equipment. In all cases, the current should be shut off if possible before the extinguishing operations begin. As long as the current is flowing there is danger of shock to the operator and of additional electric damage from short circuiting the electrical equipment. When the current is shut off there is no danger of shock, and where relatively pure water is used, the equipment can be dried out, with very little damage beyond that caused by the fire.

Fog for Advanced Electrical Fires

Where carbon tetrachloride or carbon dioxide is at hand, they are the best extinguishers to use on small electric fires. However, where the fire has reached an advanced stage and it is impossible to work in close enough to apply these extinguishers, or where they are not at hand, then the fog nozzle may be used and water applied as quickly as possible. There are times when, due to various circumstances, the current cannot be shut off. There is ordinarily no danger to firemen in playing hose streams on low voltage circuits as pure water is a relatively poor conductor. With high voltage, however, a solid stream may conduct dangerous amounts of electric current. When the fog nozzle is used, there is no danger to the

operator as the stream is broken up and the separate drops of water do not form an electric path.

There is the additional hazard of burning oil when oil switches, transformers, or other electric equipment containing oil are burning. Where the current can be shut off, these fires may be extinguished as any oil fire. When charged and the current is flowing, under no circumstances should foam, soda and acid, or a loaded stream extinguisher be used. The chemicals contained in these extinguishers are excellent conductors of electricity and their use may result in serious injury to the operator, or the salts deposited on the wiring may make it necessary to scrap the entire piece of equipment. Carbon dioxide or carbon tetrachloride are good extinguishers to use in these cases. However, when they are not available or cannot be used, a stream from a fog nozzle is safe, efficient, and their use will not result in further damage to the machinery.



Testing the Effectiveness of a Fog Stream

Ammonia and Chlorine Leaks

There are times when the department is called to shut off refrigerating systems using ammonia, where the concentration of this gas is so strong that men not properly protected are subjected to painful and serious burns.

Water will absorb 803 times its volume of ammonia gas at 57° F., and will absorb more or less at higher or lower temperatures. The fine spray discharged from a fog nozzle is the best method available for clearing the atmosphere of ammonia gas. When using a fog nozzle for this purpose, the building should be ventilated. To do this, every possible opening should be made. Men wearing masks can then enter with hose lines equipped with fog nozzles. The nozzles should be adjusted so as to furnish a fine spray, this spray to be directed towards the ceiling. The gas will be absorbed by the water and carried off in solution.

Where a leak is located and it is possible to shut the system off, a spray nozzle directed at the point of the leak and secured in position will absorb much of the escaping gas during a fire and if the system cannot be shut off, several streams from spray nozzles will help a great deal in keeping the vapors from forming dangerous concentrations.

Chlorine is a more toxic and more corrosive gas than ammonia. While it is non-combustible, like oxygen, it will support combustion with certain substances. What has been said of ammonia is also true of chlorine; a stream from a fog nozzle will absorb this dangerous gas and render it harmless.

Dust and Finely Divided Materials

There is little need to tell a fireman of the dangers of dusts. He knows that the proper mixture of carbonaceous dust, or for that matter, the dust of any material which will burn, if fine enough and properly mixed with air, is more dangerous than dynamite.

Firemen are often called upon to extinguish fires in grain elevators, flour mills, fertilizer plants, and other places where enough dust is present to totally destroy the plant and everything in it should dispersion and ignition of dust occur. The wrong use of a heavy stream under these circumstances is liable to cause explosion and loss of life. A proper analysis must be made.

Moisture Settles Dust

Moisture causes an agglomeration of fine dust, settles it, and prevents a cloud from forming. For this reason, it is good practice to use the spray from a fog nozzle to wet down any grain in hoppers or bins before emptying them. Piles of dust may safely be wet down with a fog nozzle without danger of stirring up a cloud of fine material.

While on this subject it may be well to interject a warning. Finely divided dust of such metals as aluminum, magnesium, iron borings, zinc, bronze and dowmetal will decompose water upon oxidizing, and set hydrogen gas free. No attempt should be made to use water in extinguishing fires in these materials in bulk. While some authorities claim to have used the spray from a fog nozzle with success on these types of fires, it is an extremely dangerous practice and is not recommended.

During the progress of, or after a fire, in a building where there is an accumulation of flammable dust on beams, ledges, or other locations, the stream from a fog nozzle will settle such dust and clear the air.

Fires in conveyor systems, used in handling finely divided and dust materials, are both dangerous and hard to extinguish. A fog nozzle is about the best tool devised for handling this type of fire. Where an opening can be made into the system, the fog nozzle spray can be directed onto the fire with no danger of kicking up a cloud or scattering the particles. This is also true of fires in grease ducts such as are found in hotels and restaurants. Fog nozzles are also especially adapted for fires in shaving and sawdust vaults, and may be used without fear of causing an explosion or of scattering burning sparks or embers which might cause it to rekindle.

Fire Gases

Each year in the United States about 1,000 people lose their lives by fire. Many of these victims are not burnt but succumb to the effects of smoke and gas. In fires of all sorts, combustion is maintained by the reaction of the burning materials with the oxygen of the air. The products of combustion in all fires will vary

with the supply of oxygen present in the air.

The products of combustion (gases) given off by a burning material depend upon the material burning, the air supply, and the temperature. Most of these gases are toxic or asphyxiating and their effects upon a person forced to breathe them will depend upon the percent of gas present in the atmosphere. With some such gas as phosgene, as little as .02 per cent will kill in a very short time. Other gases, such as the various oxides of nitrogen which can be breathed with no inconvenience, will leave the victim feeling perfectly well but during the night edema of the lungs develops and the victim suffocates.

Fog Clears Away Vapors

As many such gases are soluble in water one or two fog nozzles will aid materially in clearing the air and making premises safe to enter. When called upon to wash away acids or chemicals which have resulted from a broken carboy, it is best to first clear the air of any vapors by using the spray from the nozzles and the use of a heavy stream to dilute and wash away the acid. The fog nozzles are valuable when it is necessary to keep carboys and cylinders of chemical or gases cool during a fire. In doing this, they serve two purposes—they keep the containers cool and dilute any gases or vapors that may escape.

Single Room Fires

Fires involving but one room of a dwelling or an apartment house are usually surface fires. While they are hot and there is usually a lot of flame and smoke, they look more serious than they really are. For the most part, it is the curtains, drapes, rugs, and furnishings that are burning and rarely do such fires burn through partitions or floors when they are discovered at the start and the Fire Department called. The spray from a fog nozzle on a 1½-inch line will quickly cover the entire room and extinguish such fires with surprisingly little water.

Clothes Closet Fires

What has been said of single room fires also applies to fires in clothes closets, except that there are times when it is difficult to approach close enough to properly direct the water. In such cases where the operator adjusts the fog nozzle to a fine spray, he will be able to walk up to the door of the closet under the protection of the spray, and extinguish the fire with one quick sweep of spray.

Attic Fires

Attic fires are usually hot and smoky, and in many cases it is next to impossible to advance the line up the stairway to the attic and direct the stream on the main body of fire. Frequently in attic fires, the loss caused by the fire itself is insignificant, while the loss by water to the building and contents below is extremely high. It requires very little water to stain the wall paper on the ceiling below, and in many cases the plaster is loosened and must be replaced. By using a spray nozzle, adjusted so as to form a water curtain, the operator is usually able to advance the line up the stairway; the spray will cool the atmosphere and clear a path through the smoke, and the operator is able to approach close to the main body of fire; if conditions warrant, he can adjust nozzle to form a solid stream or extinguish the fire with spray. In either case, less water is used than if solid streams were directed from windows or blindly from the stairs.

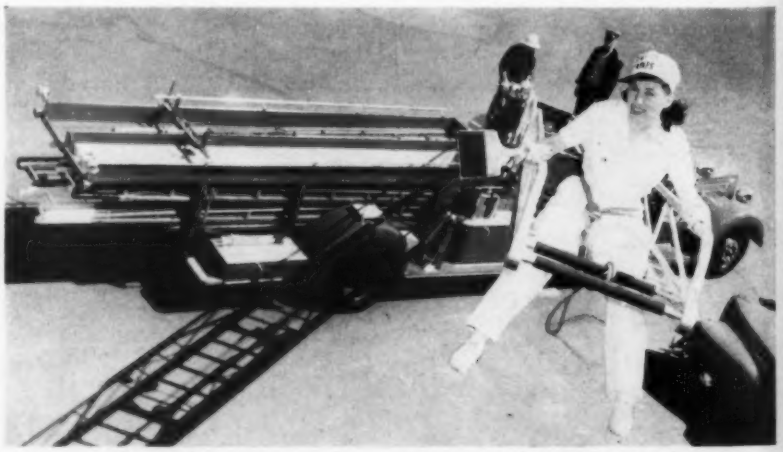
Basement and Cellar Fires

Firemen take more punishment and there are more men overcome working on fires in basements and cellars than on any other single type of fire with which they are called upon to deal. This is because of the difficulty in ventilating these rooms below grade, the kind of materials usually stored there, and the fact that there is usually but one stairway leading to the basement. The stairway from the basement acts as a flue and it is like trying to crawl down a chimney with the hot smoke and gases rising to meet you when you attempt to descend these stairs. As a rule, when you succeed in reaching the basement floor, conditions are much better and you are able to stay and continue the extinguishing operations. Here again the fog nozzle is an exceedingly valuable tool. By adjusting the stream to form a curtain of fine spray, the man can usually descend the stairs behind it, and once the basement floor is reached, he can adjust back to a solid stream and extinguish the fire.

Breaking Up Radiant Heat

Many times firemen working in the street in front of a burning building have been forced to back up because of the heat radiated by the fire, and many times it is impossible to advance a line to cover an exposure or reach a desired point because of this heat. For breaking up radiant heat, the spray nozzle has no equal. Water is the best known agent for absorbing heat, and with the spray nozzle you can spread this water out so that every particle will absorb heat and make the atmosphere in front of the fire endurable.

It may be said in conclusion that the spray nozzle is a very welcome addition to the fire fighting tools in service, and as time goes on we will probably find many new uses for it. However, for fires which have reached an advanced stage a solid stream should be used.



Aerial Truck Used in Publicity Stunt in Chickasha, Okla.

Appropriately dressed in white slacks and painter's cap, Miss Pauline Anderson seated on the top of the sixty-five-foot aerial exemplifies the spirit of Chickasha's Clean Up, Paint Up, Fix Up Campaign. Chief Frank Dews, Chickasha Fire Department, stands at the foot of the ladder to see that Miss Anderson enjoys her ride.

Sabotage by Fire

By FRED SHEPPERD

TO accomplish sabotage by fire two procedures may be followed: First, interfering with the fire protection of the property to be attacked, and secondly, starting a fire.

Interfering with the fire protection of the property may consist of tampering with fire fighting equipment by plugging the nozzles of soda and acid extinguishers, emptying the acid or soda and water mixture from the extinguishers, or both; cutting the discharge hose of the soda and acid extinguisher; replacing fluid in the carbon tetrachloride extinguisher with an inflammable liquid; emptying the contents of the carbon tetrachloride extinguisher; or releasing the gas from the carbon dioxide type of extinguisher.

Standpipes Are Vulnerable

Standpipe systems in buildings may be made inoperative by closing valves, removing valve wheels and damaging hose and hose connections on standpipes. Burring the threads on the standpipe hose outlets will make use of these outlets impossible unless suitable adapters or universal couplings are carried by the fire department. Damaging the private hose in a plant, is designed chiefly to delay the extinguishing operations in order to give the fire an opportunity to spread.

Sprinkler systems are also made inoperative by closing the valves and removing valve wheels.

While damage to municipal fire apparatus is not apt to be encountered, due to the fact that it is under quite close supervision at all times, private plant apparatus may be expected to receive attention from the saboteur.

Signal Lines May Be Damaged

Fire alarm signalling systems may be put out of commission, fire hydrants damaged, telephone lines interrupted, and watchmen's signalling systems put out of service.

Such damage is done so as to interfere with the prompt detection, prompt reporting and effective fire fighting operations. Where the municipal fire department is cooperating with the industries likely to be attacked by saboteurs, the following recommendations should be made by the fire department to plant officials:

Periodical inspection of all fire fighting equipment; extinguishers should be so sealed that their removal or tampering with would be quickly detected; instruction of workmen, or fire brigade members if there is a brigade in the plant, in precautions to take before using extinguishers.

To prevent sprinkler systems or standpipe systems from being put out of commission, daily inspections should be made, and vigilance should be maintained to prevent tampering with equipment.

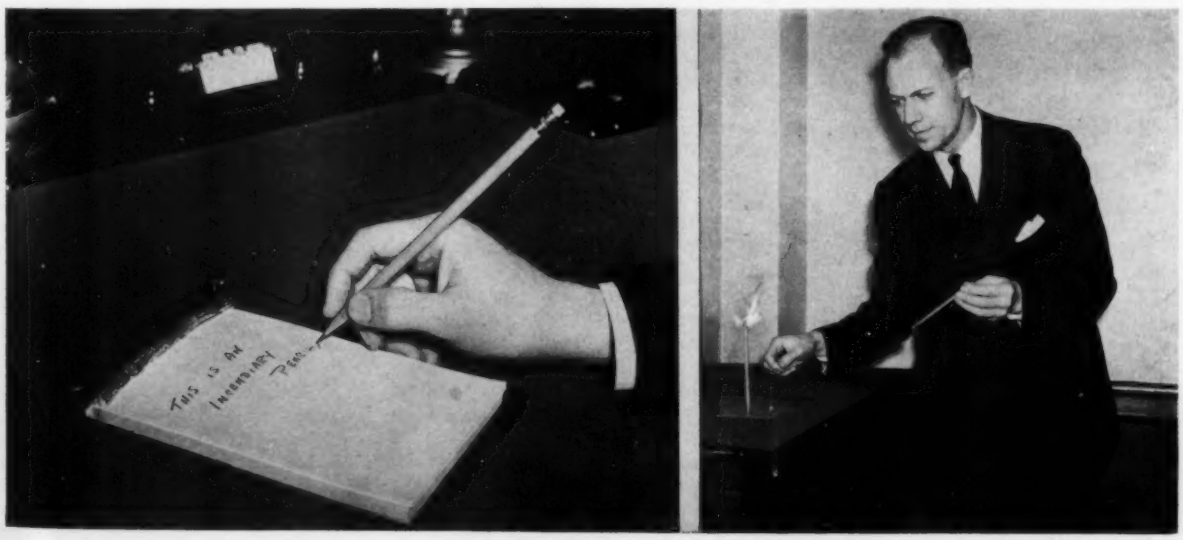
Materials of the Incendiary

The chemicals employed by the incendiary are chiefly designed to start fire rather than to speed it up. Of the chemicals used for this purpose, sodium, potassium, phosphorus and permanganate of potash (potassium permanganate) are the most commonly used.

Sodium is a metal of silver-like appearance and melts at 208 degrees F. It decomposes water, upon contact with it, and frees hydrogen. The high temperature created by the reaction ignites the hydrogen. Thus sodium is ignited when brought into contact with water. It is usually kept submerged in kerosene.

Potassium in appearance and in action is very much the same as sodium. It is a soft wax-like, silvery metal, which ignites when brought in contact with water. It is normally kept submerged in kerosene.

Phosphorus is a light yellow, wax-like, semi-transparent substance. It is luminous and phosphorescent in the dark. It is very poisonous, and takes fire on contact with air. It is



Just an Ordinary-Appearing Pencil Can Cause a Great Deal of Damage. At the Right Is the Same Type of Pencil After Ignition Has Started.

usually shipped and kept in containers filled with water.

Permanganate of potash (potassium permanganate) is usually found in the form of dark purple crystals. When treated with sulphuric acid, in the presence of combustible materials or inflammable gases, fire may result.

Other materials used for sabotage by fire include guncotton, which in its true form looks very much like ordinary cotton. It ignites readily and is extremely inflammable.

Matches, used in connection with cigarettes or "plants."

A Device Used to Start Grass Fires

It is believed that this type of plant was used to start a series of grass fires at Fairfield, Conn. Matches were bound to a cigarette by a rubber band, and, when the cigarette burned down, it ignited the matches. Flames snap the rubber band, and the matches are shot in all directions to start several fires.

Gases, including acetylene gas generated by calcium carbide in contact with water.

Celluloid scrap.

Electrical heating devices.

Clocks with fire starting devices and inflammable materials.

Incendiary "pencils," of different forms.

Methods of Sabotage by Arson

The methods of starting fires, as employed by saboteurs, vary widely. However, in practically all cases fires are set in readily combustible materials. Ignition may be brought about by direct application of fire or by the use of incendiary devices or chemicals subject to spontaneous ignition.

For example, sodium may be placed where water may reach it, such as under opening in the roof, or at the bottom of the water spout. Rain reaching it would result in ignition of the sodium and materials adjacent to it.

One novel plan used by saboteurs is to wrap sodium in a heavy paper covering and toss it into the water around piers or wharves. Sodium, being lighter than water, will float and eventually the water will work through the paper covering and reach the sodium, whereupon ignition takes place. If the sodium at the time of ignition is in contact with oil coated piles under a pier, ignition of the pier may result.

Phosphorous Acts Quickly

Phosphorus lends itself even better than sodium to the starting of fires. As long as it is covered by water, or wrapped in water-soaked coverings, no fire can start. But upon the drying out of cover, or removal of the water, the phosphorus will take fire upon exposure to the air.

One method of starting fires by phosphorus, utilizing this characteristic, is to place phosphorus in a shallow container of water, and put a small hole in the bottom of the container so that the water will slowly drip out. When the water has drained out, and the phosphorus left exposed to the air, fire will start. If combustible material such as oil-soaked waste is in contact with the phosphorus at this time, then fire will surely result.

A quicker fire is produced, using phosphorus, by wrapping a moist cover around the phosphorus. When the covering material dries out fire starts.

Potassium acts in very much the same manner as sodium, and may be used in lieu of sodium by saboteurs.

Incendiary Pencil

One of the most ingenious devices for starting fire, employing chemical action, first made its appearance during the last World War. At that time it consisted of a short piece of lead tubing in the center of which was placed a thin copper disk, soldered to the tubing around its periphery. In one end of the tubing was placed picric acid and at the other end, sulphuric acid. The both ends of the tube were plugged with wax and capped with lead caps.

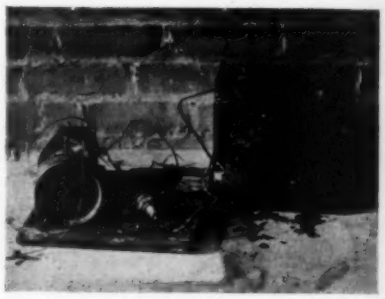
The sulphuric acid would eat through one copper disk, and upon reaching the picric acid, intense fire would occur. Other types of chemicals, which reacted upon each other so as to create fire, were also employed in these devices.

The more recent adaption of this device is the "incendiary pencil." This has the appearance of an ordinary pencil and is fitted with lead and eraser. However, the inside of the pencil follows very much the same design as the tube described above.

The time taken for the sulphuric acid to eat through the separating disk, or copper partition within the pencil, depends upon the thickness of the disk.

These pencils may be deposited in combustible materials being shipped in trains, ships, trucks or stored in plants. When the two chemicals ultimately mix, fire occurs.

Cigarettes are used usually in connection in with matches for starting fires.



A Fire-Making Machine

This outfit consists of an automobile storage battery, spark plug, vibrating coil, and an alarm clock.

The cigarette is wrapped in the center of a bundle of matches, with their heads turned toward the lit end of the cigarette. When the burning end of the cigarette reaches the matches, the matches are ignited and combustible material in contact with the matches is set afire.

Gases are sometimes utilized for starting fires, although there is great danger of explosion where gas is free in the atmosphere. The usual plan is to leave an open flame in the room where gas is permitted to escape, and when such time arrives as the gas reaches the fire, there is a flash back to the source, whereupon fire in combustible materials at that point is started. However, occasionally the gas reaches an explosive mixture in the room before the open flame is encountered, with the result that explosion occurs, and usually without subsequent fire.

Celluloid scrap is employed chiefly to speed up the start of a fire. Some form of ignition is used, such as cigarettes and matches, the celluloid intensifies the fire when the matches are ignited.

Ordinary tallow candles are probably the most commonly used devices for starting delayed action fires. As such candles burn at the rate of approximately 1⅓ inches per hour, the

(*Continued on page* 304)

One View of the $10,000,000 Fire Which Started in Stockyards at Jersey City, N. J.

Fire In Piers and Storage Tops Jersey City Losses

Estimated Damage Placed at $10,000,000; Largest Fire in History of Jersey City

A FIRE, which apparently started in a stockyard at Jersey City, N. J., on May 31, burned for twenty-four hours and by the time the weary fire fighters had brought it under control, it had destroyed a built-up waterfront area covering eight blocks.

Docks, pier sheds, grain elevators and warehouses were involved in the conflagration.

As no national defense materials were involved in the blaze, the cause of the fire is held to be purely accidental.

The fire swept an area on the waterfront, totally destroying a two-story cattle pen and hay loft of the Jersey City Stock Yards Company, an eight-story grain elevator and engine house, a large milk platform, at least nine barges, sixteen freight cars and two automobiles. Extensive damage was done to the 400-by-200-foot warehouse of the Mid-Hudson Warehouse Company.

This warehouse, a fortress-like, six-story concrete and steel building filled with commodities, was the last stronghold of the stubborn blaze to surrender to the determined fire-fighting efforts.

An exact inventory of what was in the vast warehouse and how much was destroyed or irreparably damaged is not available. Various officials enumerated crude rubber, oil, bales of paper, tool steel, alcohol, Scotch whisky, chemicals and many other commodities among the items stored in it.

New York Sends Fireboats

For about twelve hours, two New York City fireboats—the "Firefighter" and the "John J. Harvey"—had struggled to break through into a little inlet of the Hudson River to a point from which they could direct streams of water into the blazing upper floors of the warehouse, but their path was blocked by the flaming bulk of three barges.

Finally, at 9 a. m., June 1, the "Firefighter," under command of Battalion Chief John McConnell of New York, got past the wrecked barges, and in a few minutes had a big caliber stream of water directed against the wall of the building.

Even the great force of this big stream was making no headway, in razing the structure, so the "Firefighter" held off until mid-afternoon, allowing time for the walls to be weakened by the fire within. At 3:30 p. m., the fireboat aimed another stream at the building. In five minutes the walls between the fifth and sixth floor were toppled, and soon after the fire was reduced to the smouldering stage.

The warehouse building was constructed about twenty-five years ago. It was divided across its width by a fireproof wall, which effectively sealed off the part of the building from the fire. Damage in this portion of the building, therefore, was relatively small.

Part of the ruined grain elevator

was leased by the Erie Railroad, its owner, to seed merchants who reported they lost 50,000 bushels of grain and fodder in the fire. The part of the grain elevator operated by the railroad had a million-bushel capacity, but it was reported that it was not loaded to capacity at the time of the fire.

All investigators seemed agreed that the fire broke out in the cattle pens while a crew of employes, unusually small because it was the evening of a Memorial Day weeeknd, was out to supper. The high wind fanned the flames and the fire caught on quickly in several places, soon spreading to the grain elevator.

Tugboats Trying to Fight the Fire Which Spread to the Erie Railroad Terminal and Destroyed an Eight-Story Grain Elevator

Several Explosions Reported

Witnesses reported that there were several explosions after the grain elevator caught fire. The explosion reports were borne out by the fact that a light piece of corrugated iron from the grain elevator was found nearly two miles away from the scene of the fire.

Fire officials agreed that loss from the fire, which is estimated at $25,000,000, exceeded that of any in Jersey City's history. It was worse than that of November, 1924, when an explosion in a saltpetre factory spread, destroying the American Sugar Refining Company plant and near-by tenements.

The problem of the firefighters was complicated by the outbreak of another three-alarm fire in the city about a mile and a half away from the waterfront blaze. Part of the Jersey City fire equipment, sorely needed at the waterfront, was diverted to the scene of the second blaze. The second fire, of undetermined origin, damaged six buildings, caused injuries to two persons and made five families homeless.

N. B. F. U. Elects Officers

Robert P. Barbour, United States Manager of the Northern Assurance Company was elected President of the National Board of Fire Underwriters at its seventy-fifth anniversary meeting at the Waldorf-Astoria Hotel, New York, on May 28. He succeeds Colonel F. D. Layton, President of the National Fire Insurance Company of Hartford, who had served as President of the Board for two terms. Mr. Barbour is the thirty-fifth President of the National Board of Fire Underwriters.

John M. Thomas, President of the National Union Fire Insurance Company of Pittsburgh was advanced from Chairman of the Executive Committee to succeed Mr. Barbour as Vice President of the Board. Sumner Ballard, President of the International Insurance Company was re-elected Secretary and B. M. Culver, President of the Continental Insurance Company was re-elected Treasurer. General Manager W. E. Mallalieu and Assistant General Managers Charles H. Lum and F. S. Dauwalter were re-elected.

Five members elected to the Executive Committee to serve three terms are: John R. Cooney, President of the Firemen's Insurance Company of Newark; W. B. Cruttenden, President of the Springfield Fire & Marine Insurance Company; Harold Warner, United States Manager of the Royal-Liverpool Groups; J. Lester Parsons, President of the United States Fire Insurance Company, and Hart Darlington, Mgr., Norwich Union Fire Ins. Soc.

Three Perish in Jail Fire

A young woman and two men, only occupants of the tiny, unguarded Belle Vernon, Pa., jail, perished in a fire believed to have been started by the woman, who had been arrested for persistently blowing an automobile horn. She is believed to have set fire to rags and a chair.

The "Firefighter," a New York City Fireboat, Directing Heavy Streams at a Warehouse

Daughters of New Jersey Fire Chiefs Graduate

On June 8 in the graduating class of nurses in the training school of the Holy Name Hospital in Teaneck, N. J., were three young ladies—all daughters of Fire Chiefs of adjacent communities in Bergen County, N. J. Not one of them had ever met prior to entering the school. These young Florence Nightingales are Miss Phillis Ford whose father is Chief William Ford of Englewood; Miss Gertrude Walsh whose father is Chief Frank Walsh of Hackensack, and Miss Regina Murray whose father is Chief Frank A. Murray of Teaneck, N. J.—WM. JEROME DALY.

Boxing Shows Planned to Aid British Fire Fighters

Firemen in this country and Canada will be given an opportunity to aid materially in the work of the British Fire Fighters, when plans now being formulated by the International Fire Fighters Association are developed. These plans are for a series of boxing shows, to be held in cities in the United States and Canada, by which it is hoped to raise money for the relief fund of the British Fire Fighters.

Jack Kearns, noted boxing promoter and former manager of Jack Dempsey, is cooperating with the International Fire Fighters, and will communicate directly with the locals of the association, and with the local boxing promoters in such cities, in regard to his plans for the boxing shows.

All local units of the Fire Fighters Association in the larger cities have received letters, outlining the plan, and with united efforts directed towards its fulfillment, it is expected to be a very successful means of assisting the British.

Chief Passes 50th Milestone

The privilege of acting in the satisfying role of public servant for half a century is one that is given to few persons. Chief A. H. Bockelman of Galveston, Texas, had the pleasure of completing his fiftieth year of service as a member of the Fire Department of that city recently, and looking back, recalled the many varied and extreme types of fires that he attended in those years.

It was on May 1, 1891, that Chief Bockelman was appointed a fireman by Chief William Oldenberg, who was the first paid Chief of the Galveston Fire Department. His first assignment was as hoseman at the Star State fire station. Six years later, he was promoted to Captain, and in 1929 he became Chief.

Chief Bockelman knows what it means to fight wharf fires, dock fires, ship fires, cotton fires, and fires resulting from floods and storms. In recent years, however, Galveston has not suffered heavy fire losses, and for the past six years, has received the maximum good fire record credit.

CIVIL DEFENSE ORGANIZATION SET UP FOR NATIONAL SERVICE

Training of Home Guards and Volunteer Fire Fighters Included

On May 20, the President of the United States established the Office of Civilian Defense to mobilize American civilians, women as well as men, for home defense efforts, including the maintenance of national morale, the organization of volunteer fire fighting and anti-bomb squads, and the training of home guards to protect bridges, culverts, waterworks and vital industries from saboteurs and spies. Mayor F. H. LaGuardia, of New York, was appointed Director of the office.

Order for Starting Office

The executive order establishing the office was, in part, as follows:

1. There is established within the Office for Emergency Management of the executive office of the President the Office of Civilian Defense, at the head of which shall be a director appointed by the President. The director shall discharge and perform his responsibilities and duties under the direction and supervision of the President. The director shall receive no salary or other remuneration for his services, but shall be entitled to actual and necessary transportation, subsistence, and other expenses incidental to the performance of his duties.

2. Subject to such policies, directions and regulations as the President may from time to time prescribe, and with such advice and assistance as may be necessary from the other departments and agencies as far as possible, the director shall perform and discharge the following described duties and responsibilies:

A. Serve as the center for the coordination of Federal civilian defense activities which involve relationships between the Federal government and state and local governments, territories, insular possessions, and the District of Columbia (as hereinafter used in this order the term "state and local" shall include territories, insular possessions, and the District of Columbia); establish and maintain contact with state and local governments and their defense agencies; and facilitate relationships between such units of government and the agencies of the Federal government in respect to defense problems.

B. Keep informed of problems which arise from the impact of the industrial and military defense effort upon local communities, and take necessary steps to secure the co-operation of appropriate Federal departments and agencies in dealing with such problems and in meeting the emergency needs of such communities.

C. Assist state and local governments in the establishment of state and local defense councils or other agencies designed to co-ordinate civilian defense activities.

Data Will Be Released

D. With the assistance of the Board for Civilian Protection, described in paragraph 4 of this order, study and plan measures designed to afford adequate protection of life and property in the event of emergency; and sponsor and carry out such civil defense programs, including the recruitment and training of civilian auxiliaries, and disseminate to appropriate officials of the Federal government and state and local governments such information concerning civil defense measures as may be necessary to meet emergency needs.

E. With the assistance of the Volunteer Participation Committee, described in paragraph 5 of this order, consider proposals, suggest plans and promote activities designed to sustain

(*Continued on page* 312)

Mack Fire Fighter for Ohio Township

Mack Trucks, Inc., Long Island City, N. Y., has announced the delivery of this Type 85 triple combination Mack pumper for Boardman, Ohio. This special sedan cab truck is capable of accommodating a six-man crew; has a 750 gpm pumping cpacity, and carries in addition to a 200-gallon booster tank, floodlights and light generating set, and an assortment of ladders, the usual miscellaneous fire fighting equipment.

New York's New Commissioner

Herewith is presented the latest portrait of Patrick Walsh, the newly named Fire Commissioner of New York City.

He was born Sept. 2, 1873, in Thurles, County Tipperary, Ireland. He came to America when a boy, worked long and hard hours on a Staten Island dairy farm, later becoming a ferryman on the Staten Island ferry.

Commissioner Patrick Walsh

Commissioner Walsh entered the Fire Department on Dec. 10, 1901, and his advancement was rapid: an engineer in 1905; Lieutenant, 1908; Captain, 1910; Battalion Chief, 1917; Deputy Chief, 1925, and Assistant Chief, 1926. He was made Commissioner last month.

Five Departments Operate on Canton Fire

Fire companies from five towns were called to fight a $500,000 fire in the Plymouth Rubber Company in Canton, Mass.

Fire started in the curing room of the key plant from what was believed to have been a static electricity charge. The company's fire department sought to control the fire, but the creation of gases and fumes necessitated their calling on the Canton Fire Department, under Chief Wm. Curtis, for aid. A second alarm was then sounded, and as the flames got out of control, a general alarm was turned into bring help from Canton's five neighboring villages of Foxboro, Stoughton, Norwood, Walpole and Sharon.

The flames jumped from the key building to the warehouse, but the firemen, through the use of heavy streams, prevented any further spread of the flames. Throughout the battle, there were minor explosions endangering the firemen. The ever-present threat of the fire spreading to about 20,000 gallons of highly explosive chemicals in other buildings made the work of the firemen perilous.

Practically all water at the fire was drafted from canals and ponds alongside of the mill. About eighteen 2½-inch lines were used, and two deluge sets. A 1,500-gallon steam pump in one of the buildings of the rubber company furnished water for eight 2½-inch lines from mill yard and factory hydrants.

Equipment to be Carried on New York Ladder Trucks

Bids were received recently by the New York Fire Department for eight 75-foot aerial ladder trucks equipped with the following tools and equipment.

Mounted as directed:

Four Indian Fire Pumps Model 90B or equal, complete with hose, nozzle and carrier, in an approved rack.

One approved 2½-gallon Foamite fire extinguisher on Elkhart holder, or equal.

One improved Buckeye, or equal, exhaust whistle with necessary attachments.

One Homelite, or equal, Model HR gasoline engine driven generator, with pilot light and three extra outlets with:

Two 500-watt Crouse-Hinds, or equal, floodlights, with bulbs.

One 250-watt Crouse-Hinds, or equal, spotlight, with bulb.

Three 100-foot lengths No. 16 two-conductor mine cable on approved reels.

Three sets twist lock connectors.

Two "Kerotest," or equal, portable emergency cutting outfits complete in case with one acetylene and one oxygen cylinder.

Two H.O.R. Model R, or equal, hand lanterns with approved holders.

Mounted on each side:

Two brass chromium-plated tubular bulls eye lanterns, N. Y. F. D. standard, supported in four chromium-plated lamp brackets.

Mounted on Life Net Box:

Six six-foot pike-poles, N. Y. F. D. standard, with suitable chromium plated brackets.

Mounted at rear:

Two ten-foot pike-poles, N. Y. F. D. standard, with brackets.

Three pike-poles, one 15-foot, one 20-foot, and one 25-foot, N. Y. F. D. standard, with brackets.

Four 8-pound steel flat head axes mounted on front part of steps, two each side, with chromium-plated brackets.

One bar cutter to 1-inch capacity.

One steel maul.

Two steel crowbars, black.

One tin roof cutter, chromium-plated.

One approved door opener, N. Y. F. D. standard.

Located in tool box:

One set of eight hardened milled open "S" car wrenches, Armstrong, or equal, for nuts ranging from ¾ to 1½ inches, inclusive.

One long handled rivet cutting hammer.

One brass oil squirt can, one pint capacity, long spout.

One Hale, or equal, door opener.

Mounted in tool platform:

One 150-foot length manila rope 2½-inch in circumference.

One wire cutter with insulated handles.

Mounted in Life Net Box:

One Atlas life net, latest type, half fold, complete with 8 oz. canvas cover.

Mounted on rear platform:

Two square shovels with suitable holders.

Two 4-tine short handled pitchforks with suitable holders.

Firemen Direct a Hose Stream to Protect an Adjoining Building at the Canton Fire

Fire College Opened as Defense Step

In line with the policy of national defense, Rochester, N. Y., recently dedicated its new fire college. Its purpose is to train firemen and civilians in fighting incendiary fires.

Battalion Chief Thomas H. Coates, director of the Fire College, outlined its courses in gas and bomb fighting techniques and manual training. He said that the college expects to train 3,000 firemen of the city and county and later teach civilian leaders.

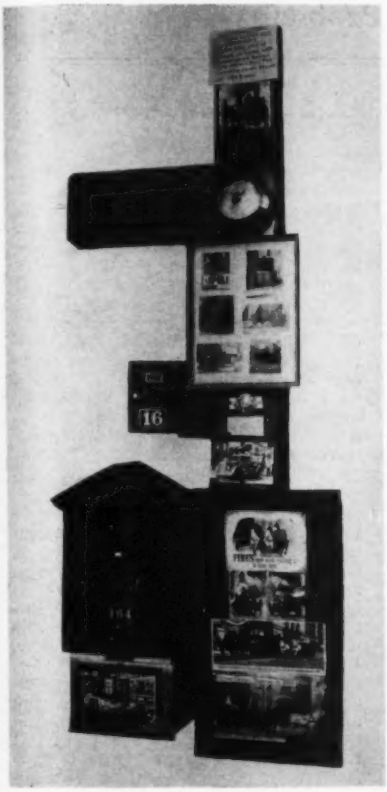
An invitation to the Monroe County Volunteer Firemen's Association to be members of the college was extended and it was thought that its facilities would be given to other neighboring counties as well.

Farrell, Permanent Chief in Hull

Within an hour after the three-man Board of Fire Engineers who had conducted the town fire department for the past two years, was abolished at a special town meeting in Hull, Mass., the Board of Selectmen voted to appoint Henry F. Farrell permanent Chief.

Unique Alarm System Installed

John Ward, of Thief River Falls, Minn., became lonesome for the sound of the old fire alarm gongs which were so familiar to him when he was a member of the "Buffs" in New York City. To satisfy his longing, he obtained an



Fire Alarm System and Display in Store

old fire gong from the New York Fire Department and a second hand fire box. He has installed this equipment in his grocery store so that now customers can turn in an alarm from the box on a post in the store to call Ward from his living quarters in the rear. He has also rigged up a telegraph key so that different members of the family can be called when they are wanted in the store.

In his spare time, Mr. Ward is a $1-a-year fire inspector in Thief River Falls.

Danbury, Conn., Seeks New Apparatus

In order to keep up its present efficient fire-fighting equipment, John H. McNamara, Chief of the Danbury, Conn., Fire Department, has requested the sum of $17,500 from the Danbury City Board of Estimate.

Primary request of the Department is an appropriation of $16,000 for the purchase of a new aerial ladder truck. The need for a new truck was graphically demonstrated at the recent disastrous fire on White Street.

The Department's second new request is for an appropriation of $1,500 to be used for the construction of an addition to the Locust Ave. fire station, which houses the Water Witch Hose Company as well as Engine No. 3 of the paid department. The addition will be used to house the new fire-police truck recently purchased by the Water Witch Hose Company.

THOMAS F. MAGNER.

Mice and Matches Again

The theory that mice don't play with matches went up in smoke, quite literally, at 8 a. m., Monday, May 19, in the Hudson-Duncan company's warehouse at Vancouver, Wash.

Vancouver firemen were called to the wholesale company's warehouse when employes, upon opening the plant, found it full of acrid white smoke. The smoke was issuing from a pile of about 200 cartons, each containing eighty-four boxes of safety matches.

When the pile was opened up, thirty to forty cartons of the combustibles burst into flame. Apparently all had been ventilated by the busy teeth of the mice. The damage did not exceed $125, but the lesson was worth more than that.

Investigation of the rest of the pile by Chief Pierre DuPaul disclosed tunnels throughout the pile of cartons. Typical nests built by the mice in many a box of matches are shown in the accompanying picture. The mice apparently chewed up the boxes and the match sticks strictly for construction purposes. There was, of course, no remaining evidence of any cases where the mice had actually gnawed the white heads of the matches.

The evidence seemed conclusive, however, that the combination of mice and matches did start the fire. Only the air-tight packaging of the matches prevented more serious consequences.

All of which calls for correction of the standard manuals and magazine articles on fire-fighting, including Collier's magazine's "Keeping Up With the World," which on December 11, 1937, assured the world that "Rats and Mice are often blamed for starting fires by gnawing the heads of matches. Yet experiments have proved that these rodents will not touch the combustible substance of a match even when dying of starvation."

Chief Pierre Du Paul Examining the Work of Mice

Apparently these Vancouver mice had not read the scientists' reports.

L. G. RICHARDS.

Cincinnati May Lose Nine Companies

For the City of Cincinnati to comply with a recent decision of the Ohio Supreme Court, decreeing that city firemen should be placed on a seventy-two hour week in according with state law, it will be necessary to reduce by nine the number of fire fighting units and to reorganize the Fire Department.

There is an alternative—the expansion of the department—but in view of the fact that "there is only some $45,000 available and unallocated in the Contingent Fund," and no other funds within the appropriations up to this time, this "is obviously not practicable at the present time," City Manager C. O. Sherrill's stated in his report to the Council.

It has been estimated that to conform with the state law, by adding 100 men to the fire department, would cost the city about $200,000 a year above what is now appropriated. Mr. Sherrill stated that the reorganization should be effected in the immediate future along the lines of a report he received from Chief Barney J. Houston.

Chief Houston's report said that if it were impossible to engage 100 additional men to operate the department on the same efficient basis as it is now it would be necessary to close six engine companies and three ladder companies and transfer their personnel. Contracts with urban settlements outside the city would have to be cancelled.

The fire department at present has thirty-seven stations, operating fifty-three pieces of motor fire apparatus, and all companies are strategically located to cover high-value districts and suburban districts with the quickest service possible.

Entire Factory Destroyed

A spectacular fire swept through an entire unit of the Fort Pitt Spring Company's large plant on Thursday evening, April 17. The plant consists of two 1½ frame and iron clad buildings, each approximately 150 feet long and sixty feet wide.

The plant is engaged in producing materials required by the National Defense program. According to an officer of the plant, sparks came from a furnace in which springs were being heated.

By the time the first firemen arrived on the scene, the fire had made great headway and flames were soon leaping high above the roof.

The twenty-five employes on the night shift who were in the buildings when the fire broke out, fled to safety. Firemen from Mc Kees Rocks, Stowe Township, and Coraopolis, with four pumpers, fought the fire for more than two hours. The two buildings were completely destroyed.

WM. E. PATTERSON.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

USE OF FIRE DEPARTMENT TO QUELL INDUSTRIAL STRIKE RIOTS

MORE than ever before, cities, particularly industrial centers, are faced with strikes, or disputes between the employer and the employes.

Generally, strikes start out as orderly walk outs. Then when the industrial managers show a determination to keep production going, labor shows signs of force to prevent others from taking the jobs that they left.

When there is a meeting of the two shows of determinations, violence often results which becomes too large for the local police to handle.

In some such cases, the Fire Department has been called to help the police hold back the rioters by means of hose streams. Such type of work is not favored by the officers of the Fire Department, and they point out that the city is deprived of proper fire defenses at that time.

This discussion is a continuation of the one that was published in the previous issue. The problem in full appears in the box on this page, while in the box on the following page is the problem that will be discussed in the following issue.

Discussion of the Question

E. J. Ryan, Chief, Aurora, Ill.: We have never participated in a strike riot. Where there is danger of loss of life or serious injury to the facilities that may be needed by the city, such as water supply, lighting system, alarm systems, etc., I believe that the Fire Department should extend every effort to restore order.

William J. Sudeith, Chief, Saint Paul, Minn.: I feel that a Fire Department is not of much value during a riot because the rioters can cut their lines of hose and render them useless. The only time a Fire Department should be called on is where there is apt to be a fire during the riot; otherwise, I feel it is the duty of police officers, deputy sheriffs, state highway patrolmen, and our state guardsmen to handle such riots.

M. J. Brun, Chief, Fort Smith, Ark.: I do not believe fire departments should participate in dispersing crowds in a riot or labor trouble, as the results are usually the same—a bunch of injured firemen, cut hose and damaged apparatus. At least that was what happened to this department called upon to disperse a mob at a jail.

George Alford, Chief, Pine Bluff, Ark.: Fire departments are public institutions serving for the good of the community, and for the protection of all citizens against fire and other emergencies, with the exception of strikes. I would positively be against our department participating in strike riots of any nature.

E. L. Mathews, Chief, Tuscaloosa, Ala.: So far, we have not been called upon to participate in industrial plant strike riots.

I personally do not believe the Fire Department should be called to quell riots. However, if city officials order firemen out to help in an emergency, they first should be sworn in as officers and given arms for self-protection.

M. J. Corrigan, Commissioner, Chicago, Ill.: To my knowledge, the Chicago Fire Department has never participated in strike riots at industrial plants. In my opinion, the Chicago Police Department is and always was capable of maintaining proper order in these instances.

E. P. Welch, Chief, Columbus, Ohio: This department has never experienced working on a riot of any kind, at least in the twenty-eight years that I have been in the department.

I do not believe that it is a Fire Department activity to participate in quelling riots, and certainly would not occur if the municipality had sufficient police protection assisted by state organizations.

Waldo Merrill, Chief, Council Bluffs, Ia.: To my knowledge, this department has never participated in any strike riots at industrial plants.

It seems rather obvious that the Fire Department is not prepared to act in case of riots, even as much as to defend themselves. I believe the Fire Department should take a neutral stand and be prepared to put out fires for either side.

We have been called to put out fires caused by rioters, making an effort to fill our duties. If an angry crowd protested, I don't know whether or not a stream of water could protect the firemen.

Napoleon Taupier, Chief, Pawtucket, R. I.: Our Fire Department has never participated in strike riots in this city, leaving that work to the Police Department as we consider that is their work.

My personal opinion is that fire departments do not have any business taking part in strike riots as the members are not trained for that type of work and they are not equipped with implements, such as guns, riot guns, tear gas bombs, etc., to protect themselves against violence.

Edw. J. Cannon, Chief, Norfolk, Va.: We have not been called to participate in quelling strike riots. I believe the value of the Fire Department ceased upon the discovery of tear gas, which is used by all law enforcement agencies. This has proven more effective, I believe, than water in dispersing any mob or riot assembly which has become unruly. Therefore, I see no need of Fire Departments taking part in such riots as long as any police authority is available with modern equipment. I am assuming that no fire has occurred from this trouble, but if it has, the Fire Department normally will perform its regular duty in saving life and property, irrespective of cause of the fire, using any method that seems proper under the circumstances to accomplish its purpose.

H. E. Williams, Chief, Richmond, Ind.: Our only experience relative to strike riots was to extinguish a small fire at strike headquarters after a riot. The cause of the fire was unknown.

My personal opinion relative to the Fire Department taking part in such riots is that the Fire Department should take part only as a last resort, unless such riots have caused a fire, and in that case they should extinguish the fire and return to quarters. I believe that such riots should be taken care of by law enforcement agencies such as the police, sheriffs, state police, or National Guard. Should the riots get beyond the control of the above organizations, then I believe the Fire Department should do all it can to prevent further bloodshed and possible loss of life.

Joe Carmichael, Chief, Little Rock, Ark.: We have a very efficient Police Department, and we let them take care of such matters.

Leo J. Urbanski, Chief, Saint Joseph, Mo.: I don't believe that the Fire Department should take part in quelling riots. It is the duty of the Police Department.

Zephrin F. Drouin, Chief, Lewiston, Me.: In my opinion, Fire Departments should not be employed in quelling

HERE IS THE PROBLEM

Has your department ever participated in strike riots at industrial plants, and what methods did you use to quell such riots?

What is your personal opinion as to fire departments taking part in such riots?

riots. Their job is to fight fires. If firemen were used for quelling riots, it would possibly create an antagonistic feeling on the part of labor towards them, and might lead to a series of incendiary fires for revenge.

Robert McGuire, Chief, Gary, Ind.: We would not take part in strike riots unless we were called upon by our superiors to do so.

James Louis McLane, Chief, Charleston, West Va.: My department has never been called on to help quell a riot at any industrial plant.

Personally, I don't think it is the duty of a Fire Department to take part in any riot. However, if ordered by the city authorities, there might be no way out of it.

C. L. Ingram, Chief, Montgomery, Ala.: Our department has never participated in a strike riot, although we are subject to call in such emergencies. The only thing to be done would be to turn hose streams on the crowd to disperse them.

Edw. A. McHugh, Chief, Louisville, Ky.: The Louisville Fire Department has never participated in any strikes.

We personally believe that the Fire Department should take part in the prevention of fires in properties affected by the strikes and other acute emergencies such as protecting water supply, sprinkler systems and other fire fighting equipment.

Herman E. Gutheim, Chief, Cambridge, Mass.: Our department has never participated in any strike riots at industrial plants. This, in my opinion, is purely a police matter and unless fire results from such riots, the Fire Department should not interfere in police duties.

Harry J. Brown, Chief, Reading, Pa.: Our department has never been called upon to participate in strike riots.

The Fire Department's first duty is to protect the City of Reading from fire. If we are called upon to extinguish a fire, due to a strike riot which occurs at an industrial plant, we will use our 100% power to extinguish it. If we are hindered by force, we will use force to obtain our objective. Our first duty is to save life and property without any consideration for personal feelings or grievances.

William J. Lutz, Chief, Wilmington, Del.: This Department has never participated in riots at industrial plants, there not having been such occasions as would have necessitated calling the department to assist the police.

The Fire Department is a branch of the Department of Public Safety, sworn to protect life and property, and should at all times cooperate to the fullest extent with the Police Department. In such cases as under discussion, where riots would be out of control of the police, or to forestall such conditions, it would certainly be a duty of the Fire Department to render such service as would be requested of and supervised by the police officials.

C. E. Harris, Chief, Akron, Ohio: We have only participated once when somebody pulled a box. As there was no fire, we did not take an active part but returned to the fire station.

I do not believe we should take any part in riots unless there is a fire to extinguish, as we do more damage than good in such instances.

Edward F. Dahill, Chief, New Bedford, Mass.: While we would cooperate to preserve order if the mayor requested it, my opinion is that the Fire Department should mind its own business.

Thomas J. Phelan, Chief, Trenton, N. J.: In the past we have not been called upon for such service.

In my opinion, the Fire Department should not be used for the purpose of quelling riots relative to labor troubles, except as a last resort where the Police Department is unable to maintain order and where the public welfare is threatened. Only then should the Fire Department be called.

John Gibson, Chief, Mount Vernon, N. Y.: This department has never participated in a strike riot.

I do not believe that the Fire Department should take any part or action in strike riots, as that is not a Fire Department function.

Carter Bowser, Chief, Fort Wayne, Ind.: We have never had an experience of this type, and do not believe the Fire Department should have a hand in action of this kind.

Irby Klinck, Chief, Memphis, Tenn.: Up to the present time, this City has experienced no strikes of major importance.

The Fire Department is an emergency public service unit whose sworn duty is that of saving life and property.

C. M. Johnson, Chief, Knoxville, Tenn.: The Fire Department of Knoxville has never participated in a strike riot of this nature.

It is my opinion that fire departments should not be called upon to take part in troubles of this kind, except departments whose members have law enforcement powers.

Thomas H. Cotter, Chief, Providence, R. I.: This department has never had occasion to participate in the quelling of any riots or strikes.

I am strongly opposed to Fire Department participation in such strikes. Their only weapon for such participation is a stream of water, and in the event that their line were cut, they would have no defense and would be at the mercy of the mob. Also in the promotion of fire prevention it is vitally necessary to have the good will of all the people and any participation in any strike riots would of a certainty promote ill feelings among those people who felt that they were justified in striking.

S. D. Russell, Chief, Ottumwa, Ia.: We have never participated in a strike or riot.

My personal opinion is that we are somewhat out of place in such circumstances. We should be called only in the event of fire.

C. C. Killian, Chief, Fort Worth, Tex.: The Fort Worth Fire Department has never been called on to participate in strike riots or demonstrations.

It is my personal opinion that the Fire Department should not be involved in a riot of this description unless there is fire present. As I see it, this is the duty of the regular law enforcement agencies unless fire occurs during the riot, in which case, it becomes the duty of the Fire Department to protect the involved property.

From cases in nearby cities of Texas, I find that when the Fire Department does participate in a demonstration of this nature, about the only result that is obtained is for the Fire Department to lose several sections of fire hose via the axe route.

Robert Jones, Chief, Chattanooga, Tenn.: This city has been very fortunate in that no strike riots of serious consequences have occurred that demanded the use of the Fire Department to quell such riots.

The Police Department has always been capable of handling such conditions without the aid of this department. Picked men of the Police Department are sent immediately to the scene of the disorder and other than ordinary arrest there is no record of the police or strikers fighting each other.

My personal opinion is that the Fire Department should absolutely not take part in any such riots and that it should be left up to the Police Department to quell such disturbances that endanger both life and property. If the Police Department should prove itself incapable of maintaining law and order, and the lives and the property of the citizens are endangered, only then should aid from the Fire Department be sought.

Lawrence C. Cornoyer, Chief, St. Louis, Mo.: The only participation by the St. Louis Fire Department in a strike occurred about a year ago, when the engineers employed at the pumping stations of the St. Louis Municipal Water Works were on strike. At that time, I issued the recall of all firemen on off tours of duty, which was in effect for the two weeks duration of the strike. While the water distribution was not crippled one hundred per cent, we had some very serious problems in the low pressure service. All reserve pumpers were placed in strategic locations fully manned to supplement pressures and fire flow in water mains. Special attention was given to localities such as hospitals, orphan homes, institutions, hotel and apartment house districts in the industrial areas.

Fortunately, no fires of consequence occurred during this time.

The Chief of the Department or any officer of the Fire Department has no police powers except on the fire grounds when engaged at fires.

It is my honest opinion that primarily this is not the duty of the Fire Department. Prescribed ordinances in the City of St. Louis definitely outline the functions of the Chief and chief officers and the workings of the department.

I would say that in the event of

(*Continued on page* 306)

HERE IS THE PROBLEM FOR THE NEXT ISSUE

Should a volunteer fire department give to the public (through cards, posters, etc.) the district code numbers, so that the location of any fire may be determined by the public from the number of siren, whistle or horn blasts sounded?

What are the advantages or disadvantages of such a plan?

If you use such a plan, how do you handle the traffic problem in the area adjacent to the fire?

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Branched Lines

To the Editor:

An engine is pumping through a line of 2½-inch hose 1,000 feet long, branched into two parallel lines of 1½-inch hose each 300 feet long, one line equipped with a ¾-inch nozzle and the other with a ½-inch nozzle. Engine pressure is 200 pounds. What is the discharge from each of the nozzles?

A. P. K

Answer: In solving this, we first combine the two parallel lines of 1¼-inch hose into a single line of 2½-inch.

Two parallel lines, 300 feet long, of 1½-inch hose is equal to 1126 feet of 2½-inch hose single line.

1126 + 1000 = 2,126 feet of 2½-inch hose, the equivalent of the layout.

Then combine the nozzles:

¾ × ¾ = .75 × .75 = .5625

½ × ½ = .5 × .5 = .2500

.5625 + .25 = .8125

The square root of .8125 = .91, the diameter of a single nozzle equal to the sum of the ¾ and ½ inch nozzles.

The nearest standard size nozzle to a .91 inch diameter is a ⅞ inch nozzle which has a diameter of .875 inches.

K for a ⅞-inch nozzle on 2½-inch hose is .068

L is equal to 2126 ÷ 50, or 42.5

N. P. = 200 ÷ (1 + .068 × 42.5)

= 200 ÷ 3.89

= 51.41 pounds.

Note that the formula for nozzle pressure varies a little bit from the standard for nozzle pressure. The formula given herewith is more accurate for small nozzle on 2½-inch hose than is the standard formula.

Discharge from ⅞-inch nozzle at 51.4 pounds is approximately 165 gallons per minute.

The friction loss in the 1,000 foot line of 2½-inch hose from the engine to the wye connection is 68.55 lbs. (for a flow of 163 gallons per minute).

Then the pressure at the siamese is equal to 200 — 68.55, or 131.45 pounds.

Now solve for nozzle pressure on each line, assuming that the pressure at the wye is engine pressure.

Nozzle pressure on ¾-inch nozzle, 300 feet of 1½-inch hose, is found as follows:

N. P. = E. P. ÷ (1.0 + KL)

= 131.45 ÷ (1 + .455 × 6)

= 131.45 ÷ 3.73

= 35.2 pounds.

Discharge at this pressure is 99 gallons per minute approximately.

The nozzle pressure on ½-inch nozzle is found as follows:

N. P. = 131.45 ÷ (1 + .104 × 6)

= 131.45 ÷ 1.624

= 81 pounds.

The discharge at 81 pounds from the ½-inch nozzle is 66.8, or 67 gallons per minute.

The total discharge from the two nozzles is then 99 + 67, or 166 gallons per minute.

This tallies very closely with the discharge from the combined nozzle, which is 163 gallons per minute.

Foam Ingredients

To the Editor:

What ingredients are used in foam?

L. T. W.

Answer: The chemicals used in foam extinguishers and foam tanks are bicarbonate of soda and a foam stabilizing agent dissolved in water for the outer compartment, and aluminum sulphate dissolved in water for the inner cylinder. The foam stabilizing agent is sometimes extract of licorice root. This gives the foam stability, or toughness. Some manufacturers have patented stabilizers, information on the composition of which is not available.

The reaction of the two solutions in an extinguisher produces carbon dioxide gas in the form of bubbles with a light precipitate of aluminum hydroxide in the bubble film.

Water Thief

To the Editor:

What is a water thief?

R. L. P.

Answer: A water thief is a hose fitting somewhat like a wye, except that it permits a 2½-inch stream to flow right through the fitting, and on either side of the fitting a 1½-inch branch is provided. The two branches are connected to the fitting at about a thirty degree angle. Some water thieves have gate valves on each of the two 1½-inch branches while others do not possess these valves. It is possible with a water thief to have three lines from a single 2½-inch line: One 2½-inch line and two 1½-inch lines.

Handling Nozzles, and Nozzle Sizes

To the Editor:

1. I have run across two different descriptions as to how to operate a hose line from a ladder into a window. One says to take leg hold even with window sill, put nozzle through rung where leg is, reach over next rung above and fasten ladder strap, then place hook of strap on the next rung above that.

The other method was simply to put nozzle through and place strap on the rung above. The first method will provide for the hose coming back under pressure and is evidently the correct way. Which way is preferable?

2. In using the ladder strap around hose, should the opening of hook be up or down?

3. What is the proper size tip for average work with aerial ladder pipe, using two-way siamese?

4. What is the proper size tip for average work with deluge set? (three 2½-inch lines)

W. F. B.

Answer: 1.—The method you prefer for operating a line on a ladder, wherein the hose strap is so placed as to prevent the hose from coming back through the ladder, is the better method to employ. It is the way preferred by most of the large departments.

2.—In using a ladder strap, the hook is normally turned downwards.

3.—For use on aerial ladders, the ladder pipe is usually equipped with 1¼ to 1½-inch tip.

4.—For deluge set, where three lines of hose are being employed, the nozzle may be 1½ to 1¾ inches in diameter depending upon the length of the lines and the engine pressure.

Extinguishing Incendiary Bombs, Etc.

To the Editor:

1. What is the lowest temperature at which a substance will ignite, and what is this substance?

2. What can be used to extinguish those 2780 degrees F. bombs used by the Germans?

3. What is the stretch (elongation) of 1½, 2½ and 3-inch hose? The section is fifty feet and the pressure is 200 pounds.

R. E. G.

Answer: 1. Of commonly encountered substances, ethyl nitrite has the lowest point of ignition. It will ignite at 194 degrees temperature; next, carbon bisulphide, which ignites at 212 degrees.

2. Thermite bombs cannot be extinguished when afire. All that can be done is to keep the combustible materials in contact with them from becoming involved. The bombs will burn themselves out, usually in fifteen minutes.

They can, however, be moved from points of danger by special tongs or shuttles; they can also be covered with sand, talc or other material to slow down combustion. The electron bomb, of which the chief ingredient is an alloy of magnesium and aluminum, can be smothered if the bomb is completly covered. However, the igniting elements within, which burn from one quarter to one half minute, are self-sus-

taining as far as combustion is concerned. In other words, they will burn without any air whatsoever. However, the electron jacket, which burns for about fifteen minutes does require air to sustain combustion.

3. Underwriters' specifications provide that 1½-inch hose under 300 pounds pressure, single jacket shall have not more than ten per cent elongation; 1½-inch hose, double jacket, under 400 pounds pressure, shall have not more than eight per cent elongation; 2½-inch single jacket, under 300 pounds pressure, shall not elongate more than ten per cent; 2½, 3, 3½-inch double jacket hose under 400 pounds pressure shall not elongate more than eight per cent.

Metallic Dusts Explosive

To the Editor:

Is metallic dust mixed with air explosive?

W. M.

Answer: Certain metallic dusts are highly explosive when mixed with air; others, less so.

However, metallic dusts as a general classification should be considered as explosive when mixed with air.

Fire Helmets Offered For Sale

Do any of you "Buffs" want an old fire helmet? Or an old fire lantern?

E. S. Cole, 145 Marlboro Road, Upper Darby, Pa., writes us that he has two helmets which he is offering for sale. One is from the Sellerville Volunteer Fire Department; the other is from the Rainbow Volunteer Fire Department of Reading, Penna.

The fire lantern dates back to about 1880.

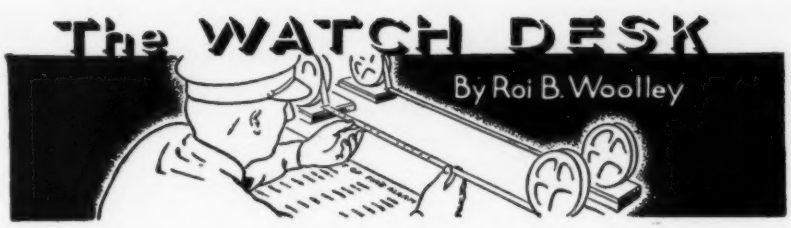
Those interested should direct their inquiries to Mr. Cole.

New Chief for Duluth, Minn.

The city council of Duluth, Minn., recently approved the appointment of C. D. Goldsmith as Chief of the Fire Department of that city.

Chief Goldsmith, formerly First Assistant Chief, succeeds Chief John A. Fisher, whose retirement became effective after more than fifty years of service.

Chief Goldsmith entered the Fire Department thirty-seven years ago, and worked his way up the ranks to his present position.



Our inquiring reporter overhauls the firemanic news of the day

Just a Grass Fire!

It may go down in the records as a "grass fire," but in the losses it bulked big! That was the blaze in the parking lot beside the Bendix Aviation "Eclipse" plant at Bendix, N. J., which destroyed twenty automobiles and badly damaged as many more before it was controlled. Claimed the blaze, starting in drainage ditch near lot into which gasoline and oil had accumulated, was not incendiary, but an accident, even though firm is working on large war orders, and cars of more than 500 employees were on the lot. Mebbe it's a warning to chiefs of communities where similar conditions exist!

* * *

Car Calls for Help!

Connecticut contrib' B9 sends us one about Ralph Peticola's auto, which has its own fire alarm. Peticola, living in Granby, Conn., was awakened in middle of night by incessant squaking of horn. Investigating, he discovered car afire in garage. Yeah—another short-circuit. The prompt warning saved, car, garage, mebbe more, from destruction.

* * *

'Nother Smoke Screen in Senate?

When a leather couch, in Senate wing of Capitol, Washington, D. C., broke into flame, after smouldering for some time (unnoticed?) police and politicians scurried frantically, called F. D., while smoke, getting into Capitol airducts, spread thin haze in Senate corridors. Once located, fire was quickly doused, lobbyists, politicians and sighteers went about business.

* * *

Believe It or Not?

Chief Henry Drake, Clifton Corners, N. Y., and Secretary Mid-Hudson Fire Chiefs' Ass'n, writes as follows:

"On January 12th, my company had an alarm at 12:42 p. m. which had been delayed over 45 minutes from the discovery of the fire; (due to a rural phone line being out of service) while, due to icy roads and because we had to chop ice from a creek and dam it, we were 23 minutes getting water on the fire from the time of our siren call. I got there four minutes ahead of our trucks and fire was coming out of seven windows and the front door of the farm house—but—the farmer slept in his house that night! And we had worked at that fire four hours! Well, if you don't believe it, just ask Retired Chief Chambers of Yonkers, who is one of my fire commissioners, for he was there and I put him to work!"

Take notice, Big City Brothers, what small town firemen are up against—and give credit to Clifton Corners!

* * *

Page Joe Penner!

Anybody wanna duck! Latest in F. D. mascots is "Oscar," a duck, adopted by N. Y. City firemen of LaGuardia Field airport! Oscar plummeted onto Runway 3, one windy Sunday, where it was found half-frozen and half-starved. The Brothers fed and warmed it, named it "Oscar." Unless some of the hungry ones have served up Oscar with applesauce he, she or "it" is still mascoting at the Field. The men have another quasi-pet named Pegleg, a sea gull, which was found with broken leg; but Pegleg only appears around mealtime and deponent saith not how he and Oscar get along together.

* * *

Horse on Him?

When fire broke out in James Simler's barn, Philadelphia, Pa., a Shetland pony became so frightened that he refused to leave the building. Simler solved problem by picking up 150-lb. animal off its feet and carrying it to safety! Hire him for your Rescue Squad, Men!

* * *

Hot Off the Ticker!

A man in West Kannapolis, N. C., got his neck blistered in a barber shop when a towel caught fire while he was getting his hair singed. . . . New site for New York F. D. new Fire College, 48th Ave. and Van Dam St., Queens. The New York Fire Commissioner said work of college will be expanded to give civilians as well as uniformed force instruction in fighting incendiary bombs. . . . When 12,000 gal. pitch still exploded at Allied Asphalt Mindery Corp. plant, Dunellen, N. J., pall of black smoke billowed over half a dozen communities. . . . Speaking of "mutual aid" Brothers from six surrounding towns worked to control fire that virtually destroyed Plastex Corp. plant, Andover, Mass. . . . When ranch house near Grant's Pass, Ore., burned four children and young mother died. . . . In Bayonne, N. J., a mother and 14-month-old daughter were fatally injured when, trapped by fire in third-floor apartment, woman jumped with infant to

(*Continued on page 308*)

Ten Maxim-Ford Fire Trucks Delivered to the U. S. Army

These trucks, built by the Maxim Motor Company, Middleboro, Mass., are equipped with Mercury engines, 500-gallon centrifugal pumps and the usual fire equipment.

WAR FARE

Alarms and Discussions Clipped and Culled from the War News of the Day, of Interest to the Fire Service.

Roi B. Woolley

Hot Mail!

A small cigar-shaped bomb in a mail bag from the U.S.A. exploded in the sorting room of the Mount Pleasant P.O., London, Eng. Luckily, no one was injured.

* * *

Revere Gets a Scare

A pilotless airplane took wing at Revere, Mass., spiraled to an altitude of about 1,000 feet, then plummeted onto the International Highway, thick with spring weather motorists. Luckily, no one was hurt, although the ship, a light coupe, burst into flames and was destroyed.

* * *

Vandals Go Haywire

Army construction officials have disclosed that desultory sabotage at Fort Mead, included driving nails in power cables, sawing through upright beams, breaking glass and fixtures, wrecking porcelain lavatory fixtures, etc. Yes, and "unexplained fires." Damage laid to "discharged workmen."

* * *

New York Plans

Ex-Fire Commissioner John J. McElligott, New York City, says 250,000 to 300,000 civilian fire auxilliaries and wardens would be needed to protect lives and property in New York in event of aerial attack. Understood the estimates are based on a two-year study of problem by fire officials. . . . He revealed that 150 of his men and officers had completed a course in the handling of chemicals, bombs and gases at Edgewood Arsenal in Maryland. . . . Rapid progress is being made in the training of fire officials in the Incendiary, Explosive and War Gas Control School of the Fire College. . . . 11,000 policemen are due to receive the same course. It's reported that the setup for protecting the big city against air raid fire damage includes six "auxiliary" fire stations to every existing regular fire station. London is reported to have 8,000 A.F.S. locations.

* * *

More "Unexplained" and "Suspicious" Fires

A 63-man Army barracks under construction at Fort McDowell on Angel Island, San Francisco, Cal., burned. No wiring had been connected and no workmen had been on site for a day. "Origin undetermined."

When pattern building of Barnett Foundry & Machine Co., Irvington, N. J., burned with patterns dating back 30 years, damage was reported at $1,000,- Some patterns held for firms holding defense orders. (Later: boys who set fire were captured).

Explosion at R. N. Chipman Chemical Co's new factory, Portland, Ore., shook structures for blocks around, burned several workers. Firm was preparing to convert facilities to manufacture of chlorates for war use. Fire followed explosion. Damage "unknown" —like the cause.

Three men were killed, at least 12 injured, when explosion wrecked two blowing engines at Woodward Iron Co. near Birmingham, Ala. Plant put out of business. Plant had few direct defense orders, but much business in iron orders from firms supplying defense needs. "No indication of sabotage."

Just before she was to sail, the U. S. army Engineers steamship Comstock was found afire in the forward hold. Origin and damage "unknown."

Fire of "undetermined origin" caused minor damage, put some machines out of operation for a short time, at Wright Aeronautical Co., plant, Paterson, N. J.

Small fire in a scaffolding around cruiser being built at N. Y. Shipbuilding plant, Camden, was extinguished by Camden City firemen. Company spokesman declined to say how it started.

A $1,600 order for castings scheduled for delivery to the Navy was ruined by fire that wrecked interior of Bridgeboro Foundry Co., N. J. plant. Queer —firm had been negotiating with Barnett Fdry. Co. whose plant also partly was destroyed by fire, to take over its Navy contracts.

Fire ruined engine room and damaged wheat cargo of 2,300-ton British ship at an East Coast Canadian Port. Out of commission for eight months!

Second fire in a month wrecked interior of powder-mixing building of Frankford Arsenal, Philadelphia, Pa. City firemen were admitted "after the blaze got beyond the control of arsenal's fire-fighting forces." Each fireman had to be personally vouched for by his battalion chief. City police who responded were barred at the gates. "Officials refused comment."

At least six workers injured and electrical equipment, masonry and windows blown to pieces by unexplained blast in U. S. Steel Corp. plant, Welland, Ont. It's said machinery was only slightly damaged. Plant "believed" to have been working on war orders.

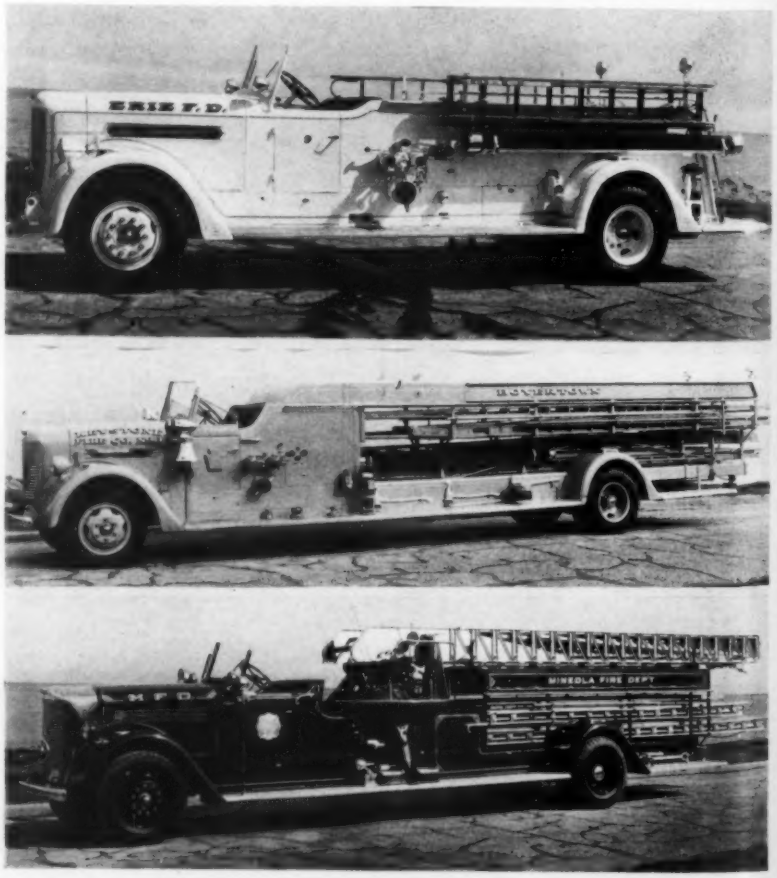
* * *

Why Only Michigan?

House of Representatives of Michigan passed, with less than an hour's debate, an anti-sabotage bill which makes it a felony to interfere with national defense production. It had already passed State Senate.

The Bill provides for 5-years imprisonment or $10,000 fine for anyone who hinders production with intent to thwart national defense. One clause provides that a factory inspector who passes faulty work for sabotage purposes and manufacturers who knowingly supply faulty war goods are subject to prosecution.

Opponents of bill said it would be used against strikers and the unions fought its adoption. Similar bills are before other State legislatures.



Pirsch Apparatus Recently Delivered

Top, 1,000-gallon triple combination pumping engine for Erie, Pa.; middle, 750-gallon quadruple ladder truck for Boyertown, Pa.; and bottom, 75-foot hydro-mechanical intermediate aerial ladder truck for Mineola, L. I., N. Y., all recently delivered by the Peter Pirsch & Sons Co. of Kenosha, Wis.

Among the Fire Fans

By Otis Smith

BOX 65 of Bay City, Mich., is sponsoring a one-day convention of Michigan Fire Fans at Bay City on June 24. Dr. L. Fernald Foster, Box 65, hopes to be able to organize the state clubs. These include Box 12, Detroit; Signal Club, Detroit; Box 14, Jackson; Box 21, Saginaw; and others.

Box 23 of Lansing will also cooperate with the plan. Dr. L. A. Drolett, Fire Commissioner and head of Box 23 will be present on the convention date. Dr. Drolett lives at 228 S. Jenison St., Lansing, Mich.

Maryland fans will be interested to learn of the delivery of six pumpers in the Baltimore area. Two American-La France pumpers went to Baltimore City as replacements. Four Seagrave cab-type pumpers went to Baltimore County as replacements. Three of the Seagraves went to the paid department, the fourth Seagrave went to the Pikesville volunteers. Some of these Seagraves got a workout at the mill fire in Ellicott City on May 27, where the Doughnut Corporation of America suffered a $3,500,000 loss. All the machines at this fire worked in fits and starts, as cotton floating in the Patapsco River stopped up the pumps ever so often.

Howard Larcombe has been called to duty in the Quartermaster Corps and is working out of Washington on fire apparatus details. Mr. Larcombe lives at 227 Granville Dr., Silver Spring, Md., and is a member of the de luxe Silver Spring Volunteer Fire Department.

Ben Ellis sent some examples of the interesting apparatus response in Boston. Certain boxes call both Boston and Brookline companies. In other instances, Boston companies pass through Brookline enroute to fires. Mr. Ellis was a guest at the 11th Annual Supper and entertainment of the Boston Fire Department Band. About 500 persons attended.

New signals may put an end to those thirteen-alarm Baltimore fires that have had the fans writing to this column. The writer has the assignment sheet at hand for the latest Baltimore fire of over six alarms. The sheet shows a special call after the sixth alarm, instead of the usual eighth alarm. Following are the new signals:

2-10-3, followed by box, nearest 3 pumpers respond.
2-10-4, followed by box, nearest 4 pumpers respond.
2-10-5, followed by box, nearest 5 pumpers respond.
2-10-6, followed by box, nearest 6 pumpers respond.

Use of these signals is optional with the commanding officer at the fire, and are used when pumpers only are required.

A copy of the Midnight Alarm program was received, telling of the show put on by the New York Fire Dept. at Madison Square Garden in 1935. In interesting addition to this writer's collection of firemanic books, pictures, etc. . . . model-builder Art Cline of Washington is now a member of the Friendship Fire Association of that city . . . model-maker Louis Turnetti of 509-11 S. Central, Los Angeles, sent some pictures of his work . . . Carl R. Fridley, 1836 Ansel Rd., Cleveland, Ohio, is interested in fire departments.

A new apparatus chart has been issued on the new York Fire Department, corrected as of May 1st. The copyrighted charts are issued by William H. Wallace, 198 Linden St., Rockville Centre, N. Y., and sell for fifty cents. Mr. Wallace is Lieut. of H. & L. No. 1, Rockville Centre.

A picture of the Seagrave aerial of Rescue Fire Co., Cambridge, Md., was received from J. Emory Parks, of that company.

McElligott With Todd Shipyards

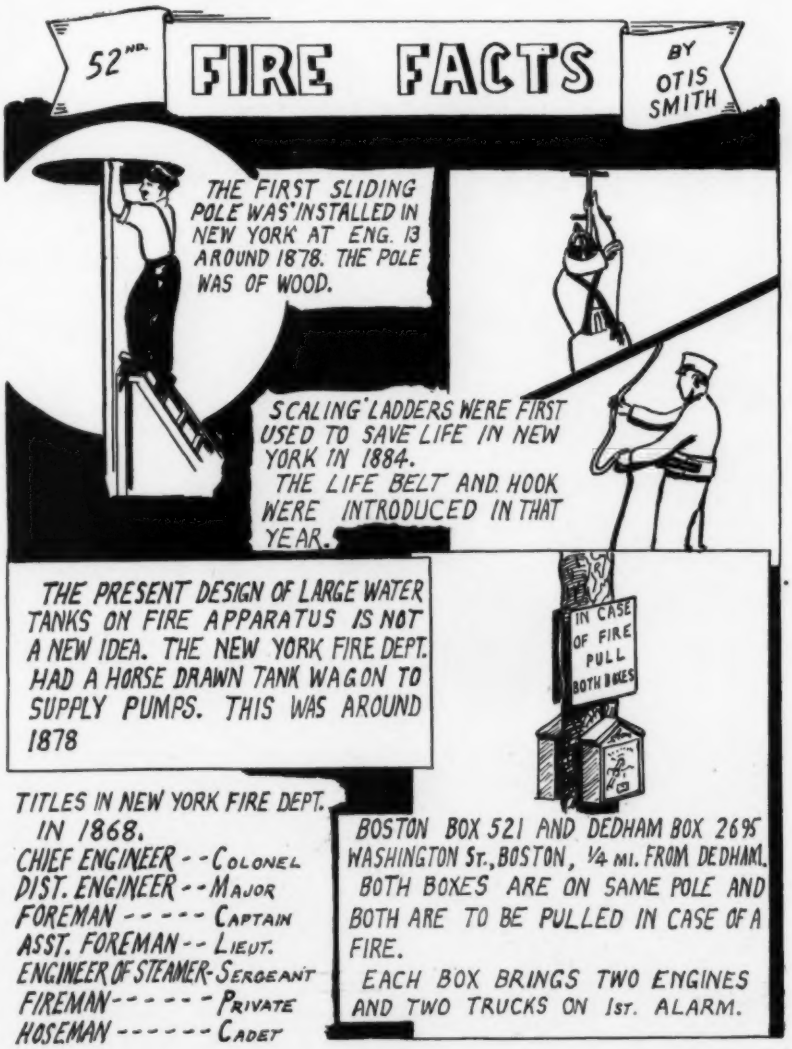
John J. McElligott, former Fire Commissioner of New York City, has become associated with the Todd Shipyards Corporation as a fire prevention and safety consultant. In his new post he will advise the company on preventive measures in its two local subsidiaries, the Robins Drydock plant in Brooklyn, and the Tiejen and Lang plant in Hoboken, both of which plants are operating at capacity in ship repair work.

Fire College Graduates 200

Two hundred paid and volunteer firemen were awarded certificates of merit at the graduation ceremonies of the Edgewater, N. J. Fire College and Drill school. Mayor Henry Wissel, who presided at the graduation exercises, paid tribute to the students, upon the completion of the fourteen-week course, commending them for giving their time in the interest of the communities they represented, which included over twenty municipalities.

Preceding the graduation exercises, a drill exhibition was presented by some of the Edgewater firemen, under the direction of Chief George P. Lasher and Deputy Chief William B. Leitchenfield, heads of the college.

Gold wrist watches were presented by the students to Chief Lasher and Deputy Chief Leitchenfield, in appreciation for their instruction and guidance.


52ND.
FIRE FACTS
BY OTIS SMITH
THE FIRST SLIDING POLE WAS INSTALLED IN NEW YORK AT ENG. 13 AROUND 1878. THE POLE WAS OF WOOD.
SCALING LADDERS WERE FIRST USED TO SAVE LIFE IN NEW YORK IN 1884. THE LIFE BELT AND HOOK WERE INTRODUCED IN THAT YEAR.
THE PRESENT DESIGN OF LARGE WATER TANKS ON FIRE APPARATUS IS NOT A NEW IDEA. THE NEW YORK FIRE DEPT. HAD A HORSE DRAWN TANK WAGON TO SUPPLY PUMPS. THIS WAS AROUND 1878
IN CASE OF FIRE PULL BOTH BOXES
TITLES IN NEW YORK FIRE DEPT. IN 1868.
CHIEF ENGINEER -- COLONEL
DIST. ENGINEER -- MAJOR
FOREMAN ----- CAPTAIN
ASST. FOREMAN -- LIEUT.
ENGINEER OF STEAMER-SERGEANT
FIREMAN ------ PRIVATE
HOSEMAN ------ CADET
BOSTON BOX 521 AND DEDHAM BOX 2695 WASHINGTON ST., BOSTON, 1/4 MI. FROM DEDHAM. BOTH BOXES ARE ON SAME POLE AND BOTH ARE TO BE PULLED IN CASE OF A FIRE.
EACH BOX BRINGS TWO ENGINES AND TWO TRUCKS ON 1ST. ALARM.

"Chief, that Mack just don't know the word quit!

Type 80, 750-gallon centrifugal triple combination pumper, recently delivered to United States Navy Yard, Charleston, S. C.

DAY and night, from East Coast to West, Mack pumpers are proving up on their reputation for superior stamina. And officials and firemen find, as they have for decades past, that the stiffest demands of fire-fighting service do not challenge a Mack beyond its ability to deliver.

The merit of Mack apparatus—in performance and power—stems directly from the rigorous attention paid to every detail of manufacture. Mack concentrates on building vital parts *in its own factories* to remarkably close specification limits. And this high standard follows through from the raw material stage to the finished truck.

In fact, a Mack fire truck is off to a life-long record of high performance—before the first ladle of molten metal is poured into a mold. For Mack—with the largest resources in the fire apparatus industry—supports a unique, large-scale research program. New knowledges and skills gained from this research keep Mack quality unequaled.

Mack also provides 70 strategically located direct factory branches to give quick, economical, and efficient service—whenever, wherever, it may be needed. Write for complete information on this superior fire apparatus today!

Mack

The Mack Fire apparatus line includes triple and quadruple pumpers from 200 to 1500 gallon capacity, hose wagons, city service ladder trucks, squad cars — comprising 14 distinct and specialized models. Mack is proud of building the best. We invite comparison. We solicit inquiries.

MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION, NEW YORK, N. Y.

WHAT'S BURNING

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of May, 1941. These figures, compiled from the telegraphic reports, are based on estimates made at the time, and are subject to later investigations and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending May 31	Loss in Thousands of Dollar
Los Angeles, Cal.—Cotton warehouse, destroyed	65
Hartford, Conn.—Furniture warehouse	90
Vegreville, Alta.—Grain elevators and a quantity of grain	50
Clinton, Ind.—Coal grading tipple	150
Grenada, Miss.—Lumber plant, damaged	50
Pittsburgh, Pa.—Industrial firm, damaged	180
Chicago, Ill.—Business building, damaged	50
Robbinsdale, Minn.—Lumber yard destroyed	70
St. Louis, Mo.—Furniture warehouse, destroyed	50
Hubbard, Ohio—Pattern shop of industrial firm, damaged	50
Halifax, N. S.—Business building, damaged	65
Reno, Nev.—Tavern night club, destroyed	90
Seattle, Wash.—Stewart Hotel	50
Chicago, Ill.—Western Broom works	50
Boston, Mass.—Fur storage building, damaged	50
Haverhill, Mass.—Two story manufacturing plant	65
North Vernon, Ind.—W. J. Ware Lumber Company	50
Boston, Mass.—Business building, damaged	50
Morenci, Mich.—Rubber products plant and equipment, destroyed	100
Almont, Mich.—Apartments destroyed and two garages and adjoining buildings, damaged	130
Troy, N. C.—Chair company plant, damaged	50
Lewisburg, Pa.—Warehouse and hardware store	130
San Francisco, Cal.—Manufacturing plants, destroyed	50
Philadelphia, Pa.—Ritz Carlton Hotel, damaged	50
Scotsguard, Sask.—Business establishments, town hall, fire hall and three dwellings, destroyed	65
Jackson, Mich.—Twine warehouse at old State Prison, destroyed	165
Ashland, Pa.—Breaker of the Kohinoor Coal Company, damaged	80
West Brownsville, Pa.—Slaughter house and warehouse, destroyed	80
Los Angeles, Cal.—Waterfront docks and warehouse, destroyed	80
Woodriver, Ill.—Oil refinery, damaged	90
Philadelphia, Pa.—Lumber yard and ten dwellings, destroyed and machine shop and new shipwards, damaged	2,500
Aitkin, Minn.—Business block, destroyed	65
Crosby, Miss.—Lumber mill, stored lumber, box cars, restaurant, two stores, destroyed	900
North Kansas City, Mo.—Warehouse and mixing plant of a milling company, destroyed	50
Petersburg, Va.—Business establishment, damaged	50
Sussex, N. J.—Manufacturing establishments, destroyed	65
Greenville, S. C.—Business block, damaged	425
Suffolk, Va.—Lumber mills, damaged	90
Ryegate, Vt.—Farm buildings, general store, post office and town clerk's office, destroyed	50
Hampden-Sidney, Va.—College library buildings, destroyed	50
Darlington, S. C.—Lumber company	50
Salisbury, Md.—Mill and a dwelling, destroyed and several other dwellings damaged	700
Manton, N. Dak.—Courthouse, damaged	50
Moosehead Lake, Me.—Sportsmen's camp, cottages and timber, destroyed	90
Louisa, Ky.—Creosoting plant destroyed	90
Cannon Falls, Minn.—Grain and grain elevator, destroyed	50
Lanesboro, Minn.—Community hall, destroyed	50
Massillon, Ohio—Two business blocks, damaged	60
Richmond, Va.—Four-story manufacturing plant and offices, destroyed	85
Portage La Prairie, Manitoba—Airplanes and hangar	80
Hyde Park, Mass.—Lumber yard, destroyed	50
Attleboro, Mass.—Business block, damaged	50
Cheyenne, Wyo.—Union Pacific Railroad Shops, destroyed	800
Riverton, Conn.—Paper plant destroyed	65
Darlington, S. C.—Lumber yard, destroyed	50
Orleans, Vt.—Plant of Orleans Plywood Co., destroyed	50
Hoquiam, Wash.—Mill of Acme Door Co., destroyed	170
Detroit, Mich.—Whse. owned by J. Schwartz, adj. property	50
Miami, Fla.—Grade View School destroyed	50
Ellicott City, Md.—Plant of Doughout Corp. of America, damaged	800
W. Yellowstone, Mont.—Property owned by M. W. Bucey	50
Angels Camp, Calif.—Main business block destroyed	85
South Hammond, Ind.—Roundhouse of the Monon Railroad	50
Gimco City, Ind.—Plant of American Gypsum Co., damaged	80
Camden, N. J.—Property occupied by Dominick Caruso and Kornman's Dress Mfg. Co. plant	80
Philadelphia, Pa.—National Waste Co. plant Manayunk (Sec.)	400
Middletown, Iowa—Middletown Co-operative Elevator Co., and Burlington passenger depot	50
Baltimore, Md.—Concessions at Bay Shore Park, damaged	125
Metamora, Ill.—Lincoln Tavern and adj. property destroyed	80
Lawrenceburg, Ind.—Lawrenceburg Roller Mills plant	600
Indianapolis, Ind.—Several cars and garage of Indianapolis Motor Speedway	80
Clifton, N. J.—Apartment property at 30 Day St., damaged	50
Jackson, Mich.—Siddall Coal Co. and several adj. properties	125
Tarboro, N. C.—Clark tobacco warehouse destroyed	50
Ardmore, Pa.—Business property 4-10 E. Lancaster Ave.	80
Eaglesmere, Pa.—Hotel Raymond destroyed	65
Pittston, Pa.—Pittston Transfer Warehouse, damaged	50
Mansfield, Ohio—Bldg. of Westbrook Country Club, 2 mi. north	65
Scott's Run, W. Va.—Tipple at Pursglove No. 1 coal mine	60
Jersey City, N. J.—Whse. property, piers, barges, etc. destroyed	4,000

Baltimore Has Two 6-Alarms

Ten firemen were injured when flames destroyed two century-old wharves, an excursion steamer, and a harbor barge in Baltimore, Md., on May 15. Fire was first seen on the steamer Tolchester, tied up at Pier 16, Light Street. The alarm office received a phone call and a box alarm at 12:27 a.m., and eight companies were dispatched to the location.

Within a matter of minutes, the vessel was ablaze from stem to stern and the flames had leaped to the two piers. Two fireboats towed the blazing vessels away from the wharves and went to work on the boats. Piers 16 and 17 were destroyed, while the upper floors of Piers 18 and 19 were damaged. Damage to Piers 18 and 19 amounted to about $35,000. It was announced that it would cost about $400,000 to replace the Tolchester with a steamer of like size.

Thirty engine companies, five trucks, one hose, one chemical, one tower, and two boats responded to this fire. The department's new signal was used after the sixth alarm to summon pumpers only. The signal 2-10-6, followed by the box number, brought the six nearest engine companies to the box. It is thought that the fire may have been caused by the use of acetylene torches earlier in the night.

On May 22, a six-alarm fire swept through the factory of the Cleaners Hanger Co., manufacturers of coat hangers, in the 3500 block Boston Street. The blaze menaced the storage tanks and a grease plant of the Standard Oil Co., less than one hundred yards away. A six-story broom factory was also menaced.

Exploding drums of naphtha spread fire throughout the building and took part of the roof off. The fire started when a spark from a welding torch leaped about twelve feet and fell into an open tank containing 700 gallons of paint. Nineteen engines, four trucks, and a chemical unit responded to the six alarms.

OTIS SMITH.

Disaster Truck for Edgewater

A "disaster truck," similar to trucks maintained by the U. S. Army for use in case of airplane crashes, is to be added to the Fire Department of Edgewater, N. J. The truck will be used for rescue and first aid work in all cases of disaster.

Equipment on the truck will include a 5,000-watt electric generator, 500-gallon capacity pumps and a tank which will carry 250 gallons of water. There will also be oxygen masks, an inhalator, smoke masks, electric power hammer, saw and auger; asbestos suits, heating pads, blankets, a stretcher, kits equipped for treatment of those temporarily blinded; a life line, block and tackle, steel bars for prying open the bodies of autos in case of wrecks, and 2½ and 1½-inch hose.

The truck's cab will have the capacity for six men. Delivery is expected about the middle of June.

Fire Sweeps Two Piers at Baltimore, Md.

New York Apparatus Chart

A revised chart of fire apparatus in the New York Fire Department has recently been issued by William H. Wallace, 198 Linden Street, Rockville Centre, N. Y. It is 17 x 22 inches in size and includes the following information: Company number, battalion division, address; make of apparatus, year of construction, capacity of engine; make and year of hose wagon; make, year and height of truck; make and year of tractor; and also a summary of the apparatus in service.

This information is given on every piece of apparatus in the New York Department. Copies of the chart may be secured from Mr. Wallace, at fifty cents each.

Newark Holds Test Blackout

In the blackout held in Newark, N. J., on May 25 seven Federal sirens were used as air raid alarms.

Federal No. 7, a 7½ h. p., vertical siren, several Federal No. 2 sirens, two h. p., vertical sirens and several Model G hand-operated sirens were used. The sirens were all blown simultaneously to the following timing which was approved by the U. S. War Department:

11:45 p. m.—Alert Signal—Eight seconds on, sixteen seconds off, five times.

12:15 a. m.—Air Raid Signal—Continuously up and down scale for two minutes.

12:30 a. m.—All Clear Signal—One twenty-second blast at full speed.

Radio Station WOR gave the signal for each siren blast by operating a siren over the radio. This method of starting, made it certain that all sirens would blow simultaneously, although operated from separate points during the test. Officials stated that the city of Newark received satisfactory sound coverage for the test. In spite of the total blackout for fifteen minutes, no fires and no burglaries and no accidents were reported during that period.

"Last Man Club" Holds Dinner

Fifty members of the Nashville Fire Department's "Last Man Club" held their eleventh annual dinner. Luther Luton, member of the Board of Public Works, Fire Chief J. A. Scruggs and Assistant Chiefs John Lassiter and H. D. Demonbreun, and Battalion Chiefs George Finley and B. F. Mattingly were guests of honor.

Mr. Luton spoke briefly to the group commending the work of the fire department in steady yearly reduction of fire losses in the city. The club is made up of members of the fire department appointed by the late George Tompkins, former member of the Board of Public Works, who died in 1930. The seventy-nine men appointed by Tompkins on May 1, 1930, have set aside May 1 as a date for annual celebration.

Artie Burrus was elected President to succeed Albert Shelton, Jr., and D. T. Dickens and Dewey George were re-elected Secretary and Chaplain, respectively. Memorial services honoring members of the club who have died were held at the various cemeteries.

Chief Letts at Camp

Chief William W. Letts has entered the Federal Service by accepting a Chief's position in the Fire Marshal's Office, Camp Blanding, Fla. Camp Blanding is one of the largest training centers in the United States.

Federal Siren Used in Blackout

Left to right, Fred M. Rosseland, Chairman of Public Safety Committee of Newark Defense Council; Gervaise S. Chittick, Engineer of the Newark Defense Council; workmen who installed the siren; and N. J. Kohl, Sales Engineer, Signal Division of the Federal Electric Company, inspect one of the seven Federal sirens used as the air raid alarm.

Chicago Group Plans Trip to I. A. F. C. Convention

Under the direction of Chief Frank C. McAuliffe of the Chicago Fire Insurance Patrols, 100 South Desplaines Street, Chicago, Ill., an excellent trip has been planned for the Mid-Western members of the I. A. F. C., to the annual convention in Boston. Chief McAuliffe also extends a cordial invitation to Chiefs from other sections of the country who will be passing through Chicago en route to the meeting, to accompany them.

The itinerary follows:

Sunday, August 17

Special train will leave LaSalle Street Station, Chicago, at 6:00 p. m. Central Standard Time.

Monday, August 18

Early morning finds the train leaving Buffalo via the Lackawanna Railroad. The train goes through the most picturesque country-side east of the Rockies, the historic Genesee Valley, Elmira and Binghamton, N. Y., the Chemung and Susquehanna Rivers, Scranton and the Anthracite Coal fields of Pennsylvania, the scenic Pocono Mountains and the world famous Delaware Water Gap, the picturesque highlands and beautiful residential homes and parks of Northern New Jersey.

Upon arriving at New York, the group will board an Eastern Steamship Line boat, leaving at 4:30 p. m., Eastern Standard Time, and embark on an enchanting adventure. The towers of Manhattan recede against the setting sun as the bridges of the East River pass overhead like giant hoops of steel. Then lovely Long Island Sound, and an evening of shipboard amusement.

Tuesday, August 19th

Steamer arrives in Boston at 8:00 a. m.

Rail and Steamer Fares

The round-trip fare from Chicago to Boston and return via—Nickel Plate-Lackawanna to New York, Eastern Steamship Lines to Boston; returning all rail direct or via New York..... $61.30
(Tickets for travel in upper berths only may be purchased at a slight reduction.)

Pullman Fares

Chicago to New York

Lower berth	$ 6.30
Upper Berth	4.35
Compartment	17.85
Drawing-room	22.05

Boston to Chicago

Lower berth	7.10
Upper berth	4.90
Compartment	19.95
Drawing-room	25.20

Steamship Accommodations

New York to Boston

Outside stateroom accommodating two persons..... $ 3.00

Passengers en route from points other than Chicago should consult local railroad ticket agent for fares applying from home town to Boston in connection with rail and steamer routing shown above.

Hotel Rates in Boston

Rates at some of Boston's leading hotels for rooms with private bath have been established for the duration of the I.A.F.C. Conference as follows:

	Statler-Hdqts.	Parker House
Single	$3.50—$ 8.00	$3.50—$4.50
Double	$5.00—$10.00	$5.00—$6.50
Twin Bed	$6.00—$12.00	$6.00—$7.00
	Copley Plaza	Lenox
Single	$4.00	$3.00—$3.50
Double	$6.00	$4.00—$4.50
Twin Bed	$7.00	$5.00—$6.00
	Manger	Bellevue
Single	$2.50	$3.00—$5.00
Double	$3.50	$4.50—$7.00
Twin Bed	$3.50	$5.00—$8.00
	Kenmore	Somerset
Single	$3.50—$5.00	$3.50—$4.00
Double	$5.00—$7.00	.....
Twin Bed	$5.00—$7.00	$6.00—$7.00
	Bradford	Commonw'lth
Single	$3.00—$4.00	$2.00—$2.50
Double	$4.50—$5.00	$3.00
Twin Bed	$5.50—$6.00	$3.50

Lumber Yard Fire Which Menaced a Nearby Shipyard

Philadelphia Lumber Yard Fire Hits Defense Area

The $2,000,000 fire which destroyed the W. H. Lear Lumber Yard on last May 15, damaged one building at the Cramp Shipyard near by, menaced the entire yard, and ruined or damaged more than forty dwellings. In the lumber yard were great piles of material marked for national defense.

Chief William Cowden of the Philadelphia Fire Bureau stated that the fire started simultaneously in five places in the lumber yard. Assistants of the fire marshal, as well as agents of the Federal Bureau of Investigation and the local detective bureau started parallel investigations.

In the area surrounding the lumber yard, five factory and commercial structures were damaged, ten brick and frame dwellings were razed, fourteen more were made uninhabitable, and families were ordered to stay out of twenty others pending inspection. Sixty persons, including firemen and residents, were treated at hospitals or at ambulances. To care for the homeless, the Red Cross set up a disaster relief station.

Telephone and electric power lines were down throughout the district and firemen stayed on the job for two days.

Six alarms about 3 a. m. brought thirty-six pieces of apparatus and more than 400 firemen to the scene. The glare in the sky was visible as far as Chester and Trenton. Fireboats pumped water from the Delaware River to engines near the fire.

Damage to the lumber yard alone was put at more than $1,000,000. It was announced that more than 22,000,000 board feet of white pine, valuable mahogany and rare chestnut used in the construction of airplanes were destroyed by the fire.

The chief damage to the Morris and Cramp Machine shop, bordering the Cramp shipyard, was a roof.

Firemen Trying to Hold the Fire in Check

Correspondence

The Spectacular Jersey City Fire

To the Editor:

I have seen many pier fires, but the fire which spread so rapidly along the Jersey City waterfront destroying three railroad piers, a huge eight-story granary, and the Erie Railroad stockyards, gave every appearance of a London air attack and the huge fires that follow from heavy bombing.

The writer who at dark started on his way home across the river on the Erie ferryboat was more than surprised at the spectacular sight he got from the top deck of the boat.

The fire at this time was more dreadful looking than it was during the daylight hours. As the ferry rolled past the conflagration, the waters of the dark river were clearly lighted from the bright red ball of fire that was roaring skyhigh for many blocks. It looked somewhat like another Black Tom Disaster.

So splendid was the night scene from top deck of the ferryboat that I rode back and forth six times snapping a few night pictures by the light of the flames with a small camera.

Photo by Bill Herries

There Will Always Be a Jersey City

But not if they have many more fires like this. As I rode over on the Erie ferryboat and was taking this night picture of Jersey City's biggest pier fire, I really felt for a moment that I was crossing the English Channel toward a blazing London caused by invasion.

As our ferryboat passed close to the shore of the fire, one could easily see the fire boats playing water on the flames, while heavy sparks were falling down on piers all along the waterfront for a great distance. Fire boats could be seen wetting down barges about ten blocks from the fire.

The deck hand on the ferry told me that both the Erie and Hoboken ferries became real sight-seeing tours for those who wanted to see the fire, and all this service for the small fare of three cents.

Up until midnight, thousands of persons took round trip rides on these boats to get a good view of the blaze. Many passengers left the boat at Jersey City, but when they neared the fire lines they learned that the Government men were giving orders to keep everybody back from within reach of the fire.

I found out that it was due to the regular radio broadcasts of the fire that

(*Continued on page* 314)

Stratford Dedicates New Station

Town officials, firemen and residents of the Lordship section of Stratford, Conn., joined in dedicatory ceremonies held for the opening of the new Lordship fire station on May 4. The new structure was built at a cost of $11,000.

As members of Volunteer Fire Company No. 3, headed by Captain Fred Donaldson, looked on, Councilman Peter J. Ring, Chairman of the Building Committee, turned the new station over to Chief Allen D. Judson and Vernon S. Morehouse, Chairman of the Town Council.

One paid member of the Stratford Fire Department and three volunteers will be on duty at the new station at all times. The ceremonies were held in the recreation hall on the second floor of the building. Other rooms on the second floor are a dormitory with four cots, and a tile-finished shower room and a store room. The building is built to house two pieces of apparatus.

THOMAS F. MAGNER.

New Fire House Opened at Stratford, Conn.

Book Review

"Air Raid Precautions," a 378-page book, issued by the Chemical Publishing Company, Inc., Brooklyn, N. Y. Price, $3 per copy. This book is apparently a reprint of recent British documents and reprinted by authority of His Britannic Majesty's Stationery Office. It consists of ten chapters, or parts, as follows: Rescue Parties and Clearance of Debris; Organization of Decontamination Services; Organization of Air Raid Warden's Service; Structural Defense; Local Communications and Reporting of Air Raid Damage; Notes on Training and Exercises; Gas Detection and Identification Service; Protection of Windows in Commercial and Industrial Buildings; Inspection and Repair of Respirators and Oilskin Clothing; Care and Custody of Equipment.

This book should prove very useful to those charged with the responsibility of developing civil defense methods for cities.

Fire Station Opened in Boston

One of the most modern fire stations in the country was recently dedicated in the South End of Boston, Mass.

Among the innovations in the structure are automatic doors controlled by electric eyes. Instead of a harsh, clanging bell, customary means of calling the firemen to action, a silver-tongued siren will call the men.

Other considerations for the comfort of the fire fighters are tiled baths and showers, an electric kitchen and refrigerator, air-conditioned lockers and extra sockets beside each bed which may be used for reading lamps, radio or electric shaver.

Following the dedication ceremonies, an open house was held, at which hundreds of visitors inspected the new station.

Fire Sweeps Industrial Plant

The wheel and axle shop of the Pressed Steel Car Company's plant, located in Mc Kees Rocks, Pa., was swept by a fire late on Monday afternoon, May 5. The fire caused $200,000 damage before it was brought under control, and extinguished by the volunteer fire departments of Mc Kees Rocks, Stowe Township and West Park, who battled the blaze for nearly four hours.

A 200-foot section of the 500-foot axle shop was destroyed. The heat was so intense, it twisted and almost melted the corrugated iron walls and roofing.

By hard work, firemen confined the fire to the axle shop in which 100 or more huge lathes are used to turn down wheels and axles for all kinds of freight and passenger cars. All of the electric motors which turn the lathes in the burned section of the plant were ruined by the intense heat. Mr. Rushton denied any indication of sabotage as the cause of the blaze. He said a pile of 4 x 4 logs stacked against the axle shop caught fire, evidently from spontaneous combustion. Oily waste, used when turning wheels and axles on the lathes, added fuel to the fire.

While no flames were visible on the outside of the structure, heavy clouds of oily black smoke spread a pall over the Bottoms homes, whose owners and occupants were among the hundreds of sightseers. The Car Company maintains its own private fire fighting force and equipment. Approximately two months' time will be required to get the burned section of the wheel and axle shop back into full capacity.

WM. E. PATTERSON.

Chief Foster Dead

Chief Roscoe A. Foster, of the Norfolk, Va., Navy Yard Fire Department, died on June 6th in his quarters in the Navy Yard.

Long active in firemanic circles, Chief Foster was a member of the International Association of Fire Chiefs, which organization he served as a member of the Committee on Preparing for War Emergencies, and of the Southeastern Association of Fire Chiefs.

He was a native of Washington, where he served in the fire department before coming to Portsmouth 28 years ago to head the fire fighting unit at the Navy Yard.

Chief Foster was a veteran of the Spanish American War and a member of William R. Singleton Lodge No. 30, F. and A. M.

Surviving are his widow, Mrs. Bertie Lee Foster; a daughter, Virginia Lee Foster; a son, John David Foster, all of Portsmouth; four brothers, Lieut. Charles H. Foster, U. S. N., Washington; Lieut. Col. E. M. Foster, U. S. A., Hawaii; D. H. Foster, Washington, and R. F. Foster, Los Angeles, and a niece and nephew.

Quincy Wields Political Axe

When E. J. Schneidman assumed the office of mayor at Quincy, Ill., on May 5, he wielded the political axe and when he was through chopping, thirty-three firemen and twenty-nine policemen were released, and their places were filled with new appointees. However, some had served previously on both departments.

Heading the released firemen were Chief George Simon, Second Assistant Ben Laurich, and Third Assistant and Drillmaster Joseph Owens, each with more than twenty-five years of service which made them eligible for pension. Clarence Lagemann, department mechanic and Fourth Assistant Chief, was retained as mechanic, but his officership was given to a new appointee. Also, among the firemen who were dismissed was one with eighteen years of service, two less than the required for a pension.

Among the policemen who were "fired" were Chief John A. Connery, and Sergeant Herman Schnack, who had eighteen years of service.

Frank Hummelt, with 17½ years of service on the fire department, part of the time as an Assistant Chief, was appointed to succeed Simon. Hummelt returned to the service after an absence of eight years. William Vosse, for many years First Assistant, was dropped to Second. Russell Schaefer, Walter Roberts and Joseph Dierkes, former members of the department, were returned and were appointed, First, Third and Fourth Assistant Chiefs, respectively. Dierkes is also drillmaster.

FALSE ALARMS

"It's s'posed to go through a fifteen-inch circle. I ain't runnin' chances of gettin' bawled out."

THEY SCATTERED

It was 2 a.m., when the volunteer company's telephone rang, and the bachelor member answered it.

"Is my husband there?" demanded an angry voice.

"No, he's gone home," was the reply.

"How do you know?" snapped the voice, "I didn't even tell you his name."

"You didn't need to," was the retort. "When this phone rang, every darned married man in the place grabbed his hat and ducked out."

Liquor can do a good job of turning a man's head, but a pretty pair of legs can do it with less trouble.

DIPLOMACY

"I don't think that man upstairs likes to hear Georgie play his drum, but he's certainly tactful about it."

"Why?"

"This afternoon, he gave Georgie a knife and asked him if he knew what was inside the drum."

When a rich old man's hair has turned to silver, he becomes a young girl's golden opportunity.

LUCKY BOY

First Office Boy: "How much does your Chief pay you?"

Second O. B.: "I get $1,500 a year. Five dollars a week in cash, and the rest in advice."

When a man can't think straight, he blames it on his sweetie's curves.

DEFINITION OF A WOMAN

One who can spend four hours weaving her way through the crowded four-foot aisles at a department store sale without misplacing a single item on the counters, then drive home and take off two fenders going in a twelve-foot garage door.

Sometimes the apple of a man's eye turns to be a hot potato.

VERSATILE

"Consomme, bouillon, Hors d'oeuvres, fricassee poulet, pommes de terre au gratin, demitasse des glaces, and tell that mug in the corner to keep his lamps offa me moll, see?"

In the days of Queen Elizabeth, some of the ladies of the court liked to curl up with a good book, while others preferred simply to curl up with one of the pages.

FIRE SCHOOL NEWS

"You, in the back of the room, what is the meaning of 'back-draft'?"

"I dunno."

"Well, then, can you tell me what is the purpose of ventilating a fire?"

"I dunno."

"You don't! I assigned this stuff last Friday. What were you doing last night?"

"I was out drinking beer with some friends."

"You were! What audacity to stand there and tell me a thing like that! How do you ever expect to pass this course?"

"Well, I don't, mister. Ye see, I just came in to fix the radiator. I'm the janitor."

MAYBE HE ISN'T TO BLAME

The woman autoist posed for a snapshot in front of the fallen pillars of an ancient temple in Greece.

"Don't get the car in the picture," she said, "or my husband will think I ran into the place."

A monologue is a conversation between a man and his wife.

"Who shall I say is calling?"

FOR INDOOR USE

To protect machinery when not in use—to prevent access by unauthorized persons to tools, dies, patterns, drawings, secret documents, stores of explosives or inflammables, or other restricted areas—the A.D.T. Invisible Ray Alarm System provides effective and economical protection.

FOR OUTSIDE AREAS

Since the Invisible Ray is equally effective outdoors and in, night and day, over long and short distances, and is unaffected by rain, snow, fog or other weather conditions, it is the ideal protection for storage yards, railroad sidings, loading platforms and other outside areas. When conditions require, the beams are zig-zagged to form a network of invisible barriers over the protected area.

Defense Industries Use INVISIBLE LIGHT to trap saboteurs

The A.D.T. Invisible Ray Alarm System, employing photoelectric principles, casts beams of *invisible* infra-red light across the areas to be protected. Interruption of a beam by any person or vehicle passing through its path instantly and automatically transmits a silent alarm to the A.D.T. Central Station, guard headquarters, the police or other designated points, as well as performing other protective functions, such as sounding local alarm bells, closing doors or gates, turning on floodlights, etc.

Because of its flexibility, dependability, ease of installation and economy, the A.D.T. Invisible Ray Alarm is the ideal protection system not only for defense industries, but to supplement or minimize guard forces and other types of protection in all types of industrial, commercial and mercantile properties. For further information write to American District Telegraph Co., 155 Sixth Avenue, New York. Offices in all principal cities.

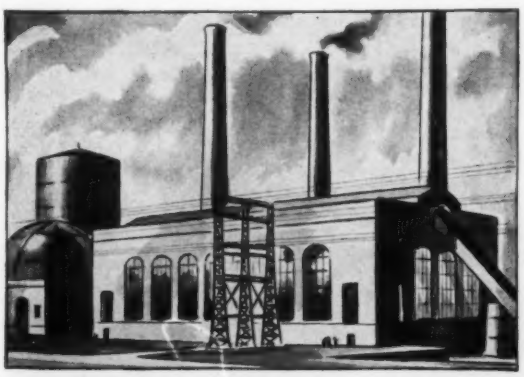
ADT

INVISIBLE RAY ALARM

One of the Services of the

NATION-WIDE A.D.T. SYSTEM

Electric Protection Against Fire · Burglary · Holdup

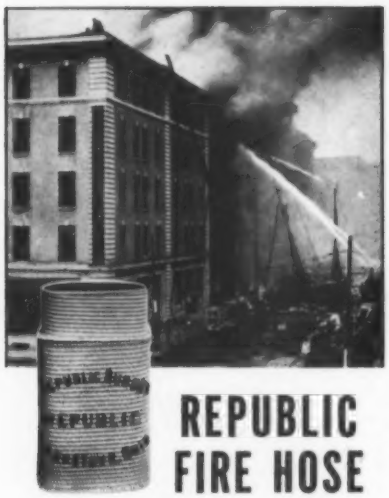


FOR PUBLIC UTILITIES

For power plants, gas and water works, Government establishments, oil depots, mines, etc., the Invisible Ray provides reliable and economical protection.

IN WAREHOUSES

Burglars, arsonists or others bent on removal or destruction of goods can be barred by using the Invisible Ray to "rope off" from intrusion all hazardous areas.



REPUBLIC FIRE HOSE

Meets every Fire Fighting Requirement

This is a simple statement which does little to dramatize the outstanding features of Republic Fire Hose. Yet, anyone who has had an active part in the constant struggle against flames appreciates the importance of equipment being completely capable of handling its part of the job under all circumstances. And that is the case with Republic Fire Hose. Manufactured to factory standards in excess of established specifications, this heavy-duty hose has demonstrated its superior strength, wear and age-resistance in leading municipalities from coast to coast. Its exceptional serviceability is assured by the most painstaking inspection and testing of materials and construction. Provar Process, exclusive Republic treatment, provides permanent protection against mildew and rot. REPUBLIC RUBBER DIVISION OF LEE RUBBER AND TIRE CORPORATION, YOUNGSTOWN, OHIO.

HOSE
BELTING
PACKING
MOLDED PRODUCTS

REPUBLIC RUBBER

CLASSIFIED ADVERTISING

Bids Wanted, For Sale and Help Wanted, $5 *per inch. Position Wanted,* $2.50 *per inch.*

WANTED

Jobbers to sell our New Improved Morning Pride Firecoat, with Scientific designed Wing Freedom Sleeve. Write today. Morning Pride Mfg. Co., Dayton, Ohio.

Convention Dates

June 12-13—INDIANA INDUSTRIAL AND VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Bremen, Ind. Secretary, W. H. Collisson, Winona Lake, Ind.

June 12-14—EASTERN ASSOCIATION OF FIRE CHIEFS. Annual Meeting, Lancaster, Pa. Secretary, Charles E. Clark, Box 217, Wayne, Pa.

June 15-18—SOUTHEASTERN ASSOCIATION OF FIRE CHIEFS. Annual Meeting, Hotel Roosevelt, Jacksonville, Fla. Secretary, W. W. Stephen, Box 904, Anniston, Ala.

June 18—THE NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION. Annual Meeting, Crestine, Ohio. Secretary, J. W. Gardner, Ashland, Ohio.

June 18-21—IDAHO STATE FIREMEN'S ASSOCIATION. Annual Convention, Wallace, Idaho. Secretary, I. J. Goff, Preston, Idaho.

June 19-21—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. Annual Meeting, Poughkeepsie, N. Y. Secretary, Chris W. Noll, Poughkeepsie, N. Y.

June 21—LEBANON COUNTY FIREMEN'S ASSOCIATION. 19th Annual Convention, Annville, Pa. Secretary, Chief Fire Marshall, A. S. Snuffer, Palmyra, Pa.

June 23-26—MICHIGAN STATE FIREMEN'S ASSOCIATION. Annual Convention, Bay City, Mich. Secretary, L. M. Kinney, Box A, Kalamazoo, Mich.

June 24-26—OHIO FIRE CHIEFS' ASSOCIATION. Annual Convention, Lancaster, Ohio. Secretary, E. J. Green, Steubenville, Ohio.

June 25—CENTRAL WESTERN (OHIO) FIREMEN'S ASSOCIATION. 11th Annual Convention, Ft. Laramie, Ohio. Secretary, Roger C. O'Donnell, Covington, Ohio.

*June 26-27—NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. 46th Annual Convention, Malverne, L. I., N. Y. Secretary, H. W. Bloechle.

July 8—STATE ASSOCIATION OF FIRE CHIEFS OF MAINE. Quarterly meeting, Rockland, Me. Secretary, Charles W. Bowker, S., Paris, Me.

July 15-18—MICHIGAN STATE FIRE COLLEGE. Annual Fire College, University of Michigan, Ann Arbor, Mich. Director Dr. C. A. Fisher, Extension Division, University of Michigan, Ann Arbor, Mich.

July 16-17—ONONDAGA COUNTY VOLUNTEER FIREMEN. Annual Convention, Minoa, N. Y. Assistant Secretary, J. C. Shedd, Minoa, N. Y.

July 16-18—MARITIME FIRE CHIEFS ASSOCIATION. Annual Convention, Edmundston, N. B. Secretary, Charles A. Cunningham, St. John, N. B.

July 20-25—TEXAS FIREMEN'S TRAINING SCHOOL. Annual Meeting, A. and M. College of Texas, College Station, Tex. Director of Firemen's Training, H. R. Brayton, A. and M. College of Texas, College Station, Tex.

July 21-25—WEST VIRGINIA FIRE SERVICE EXTENSION SCHOOL. 11th Annual State Fire School, West Virginia University, Morgantown, W. Va., Director, G. R. Spindler, 121 Mechanical Hall, Morgantown, W. Va.

July 21-23—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Wausau, Wis. Secretary, A. V. Simon, Ladysmith, Wis.

August—UTAH STATE FIREMEN'S ASSOCIATION. Annual Convention, Murray, Utah. Secretary, J. J. Creedon, Bingham Canyon, Utah.

Aug. 4-5—NEW YORK STATE FIRE FIGHTERS' ASSOCIATION. Annual Convention, Syracuse, N. Y. Secretary, Frank A. Emden, 1403 Mather Ave., Utica, N. Y.

Aug. 4-6 1941—INDIANA FIREMEN'S ASSOCIATION, 25th Annual Convention, Kokomo, Ind. Secretary, Burley Marshall, P. O. Box 725, Terre Haute, Ind.

*Aug. 7-9—MONTANA STATE FIREMEN'S ASSOCIATION. Annual Meeting, Glendive, Mont. Secretary, J. A. LaForest, Quartz Street Fire Station, Butte, Mont.

Aug. 11-13—WISCONSIN PAID FIREMEN'S ASSOCIATION. 34th Annual Convention, Marinette, Wis. Secretary, G. J. Johnson, Racine, Wis.

Aug. 12-15—VIRGINIA STATE FIREMEN'S ASSOCIATION. Annual Convention, Staunton, Va. Secretary, R. B. Barker, Newport News, Va.

Aug. 13-16—COLORADO STATE FIREMEN'S ASSOCIATION. Annual Meeting, Fire School, and Tournament, Steamboat Springs, Col. Secretary, Clinton Turnbull, 215 Boston Bldg., Denver, Col.

Aug. 16-17—VERMONT STATE FIREMEN'S ASSOCIATION. Annual meeting, place not fixed. Secretary, W. H. Adams, Vergennes, Vt.

Aug. 17-20—NEW YORK STATE PERMAMENT FIREMEN'S ASSOCIATION. Annual Convention, Auburn, N. Y. Secretary, Arthur Bleau, Weslyan Street, Amsterdam, N. Y.

Aug. 19-22—FIREMEN'S ASSOCIATION STATE OF NEW YORK. Annual Convention, Geneva, N. Y. Secretary, Fred A. Davis, Port Edward, N. Y.

Aug. 19-21—KENTUCKY FIREMEN'S ASSOCIATION. 22nd Annual Convention, Covington, Ky. Secretary, V. A. Beam, 2221 W. Broadway, Louisville, Ky.

Aug. 19-22—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 69th Annual Convention, Hotel Statler, Boston, Mass. Secretary, D. B. Tierney, Arlington, Mass.

*Aug. 20-23—WASHINGTON STATE FIREMEN'S ASSOCIATION. Annual meeting, Yakima, Wash. Secretary, Hugh Leslie, Auburn, Wash.

Aug. 22-23—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 58th Annual Convention, West Haven, Conn. Secretary, D. W. Hartford, 10 Chestnut Street, South Norwalk, Conn.

*Aug. 23-24—REGIONAL FIRE SCHOOL OF HAMILTON COUNTY. Annual Fire School, Koenig Park, Reading, Ohio.

Aug. 25-29—PENNSYLVANIA FIREMEN'S TRAINING CONFERENCE. 3rd Annual Conference, Pennsylvania State College, State College, Pa. Secretary, Charles E. Clark, Box 217, Wayne, Pa.

Aug. 26-29—DOMINION ASSOCIATION OF FIRE CHIEFS. Annual Convention. Peterborough Ont. Secretary Chief James Armstrong, Box 56, Kingston, Ont.

Aug. 28-30—WEST VIRGINIA FIREMEN'S ASSOCIATION. Annual Convention, Weston, W. Va. Secretary, H. G. Fridinger, Martinsburg, W. Va.

Sept. — NEW HAMPSHIRE STATE FIREMEN'S ASSOCIATION. Annual Meeting, place not fixed. Secretary, A. G. Robinson, Manchester, N. H.

Sept., 1941—IOWA FIREMEN'S ASSOCIATION, Annual Meeting, Chariton, Ia. Secretary-Treasurer, Paul A. Saener, Independence, Ia.

Sept. 2-5—MARYLAND FIRE COLLEGE. 12th Annual Fire College, University of Maryland, College Park, Md. Director, J. W. Just, University of Maryland, College Park, Md.

*Sept. 8-10—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. Annual Meeting, Reno, Nev. Secretary, J. W. Stevens, 1014 Merchants Exchange, San Francisco, Cal.

Sept. 9—STATE ASSOCIATION OF FIRE CHIEFS OF MAINE. Annual Meeting, Norway. Secretary, Charles W. Bowker, S. Paris, Me.

Sept. 10-11—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Middletown, Del. Secretary, W. W. Pettyjohn, Dover, Del.

Sept. 12-13—NEW JERSEY STATE FIREMEN'S ASSOCIATION. Annual Meeting, Atlantic City, N. J. Secretary, Evan F. Benners, R. 602, 24 Branford Place, Newark, N. J.

Sept. 13-14—OHIO STATE VOLUNTEER FIREMEN'S ASSOCIATION—Annual Convention, Kent, Ohio. Secretary, Sidney Wellock, 2976 S. Main Street, Akron, Ohio.

*Sept. 15-17—OREGON STATE FIREMEN'S ASSOCIATION. Annual Meeting, Bend Ore.

Sept. 22-25—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 19th Annual Convention, Huntington Hotel, Pasadena, Cal. Secretary, H. E. Strasser, 2046 Oregon Ave., Long Beach, Cal.

*Sept. 25-27—MONTANA FIRE SCHOOL. Annual Meeting, Polson, Mont. Secretary D. E. Moser, Bozeman, Mont.

Sept. 29-Oct. 2—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. 46th Annual Meeting, Hotel Jefferson, St. Louis, Mo. Secretary, Irving Shulsinger, New York City.

Oct. 2, 1941—WALWORTH COUNTY FIRE OFFICER'S ASSOCIATION. 11th Annual Meeting. Secretary-Treasurer, C. A. Foster, Lake Geneva, Wis.

Oct. 7-9, 1941—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. Annual Convention, Greenburg, Pa. Secretary, Charles E. Clark, Box 217, Wayne, Pa.

Oct. 14-16, 1941—ILLINOIS FIREMEN'S ASSOCIATION, Inc. Annual Convention, Bloomington, Ill. Secretary, Roy W. Alsip, Champaign, Ill.

Oct. 21-23, 1941—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Norfolk, Neb. Secretary-Treasurer, Louis A. Novak, Box 788, Norfolk, Neb.

*The notices marked with an asterisk are either appearing for the first time or have been changed since the preceding issue.

Manufacturers' Announcements

M. S. A. Streamlined Helmet

A new streamlined fireman's helmet has been developed by Mine Safety Appliances Company of Pittsburgh, Pa. Known as the Streamlined M. S. A. Fireman's Helmet, the unit features wide, arched side brims; long, sweeping rear brim; reinforced crown ridge and laminated bakelite construction.

Highly fracture-resistant, the streamlined helmet is non-conductive to electricity and will not soften or deteriorate from exposure to water or common chemicals. The reinforced crown ridge deflects falling objects. A soft, rubber-cushioned leather sweatband and adjustable crown hammock act as effective shock-absorbers to take the force of blows on the helmet.

A detailed and illustrated bulletin, Bulletin No. DX-5, has been issued.

Chief Fisher Retires

Chief John A. Fisher of the Duluth, Minn., Fire Department retired from active service on May 1. He retires on pension under the compulsory retirement act affecting firemen and policemen in cities of the first-class following clarification of the state act in a decision handed down recently by the State Supreme Court.

Chief Fisher has served the department during the period of transition from horse-drawn vehicles to the speedy motor fleets and mechanized equipment of today.

He was born at Prince Edward Island, Canada, April 12, 1873, and was appointed to the fire department on November 7, 1902, first serving with Engine Company No. 4 as a pipeman.

Milwaukee Chiefs Study Defense

Fourteen chiefs of communities in Milwaukee county, met at Lake, Wis., to study coordination of fire fighting strength to meet possible emergencies brought about by the speeding up of national defense work.

As a preliminary step, the chiefs voted to reorganize the Milwaukee County Association of Fire Chiefs. Chief Edwin Bryant, West Allis, was named Chairman and Chief Adolph Schuster, Lake, Secretary.

WE HAVE SOMETHING HERE YOU'LL LIKE

NATIONAL DEFENSE THROUGH FIRE DEFENSE

INDIAN FIRE PUMP EXTINGUISHERS

WILL WIN YOUR APPROVAL!

EXTENSIVE tests have proved that INDIAN tanks, which are now made from Armco Zincgrip rust-resistant steel, are pliable zinc coating, tightly adherent. They do not flake or peel and may be fabricated without injury to coating of base metal. Water may be left in the tanks indefinitely without rust or corrosion, making them superior to anything with which we have experimented.

Tests revealed that tanks made of hot rolled sheet steel and then hot dipped galvanized after fabrication were unsatisfactory, as the finish cracked at seams and points subject to hard wear. Tanks then started to peel and flake, allowing rust and corrosion to set in.

INDIAN FIRE PUMP EXTINGUISHERS put out partition fires, roof and chimney fires, insipient fires, fires from overheated stoves, and all the other Class A fires which cause so much trouble. Five-gallon tank carries on the back or by hand. Brass pump throws powerful pressure stream right to the base of the flame. Fire departments find INDIANS the solution of the smaller fires which make up an average of 70% of their calls. No need to lay hose. INDIANS do the job quickly and cheaply. *Only clear water used.* Water damage is held to a minimum.

Let us send fire department testimonials—they speak for themselves.

D. B. Smith & Co.,
Utica, N. Y.

Gentlemen: We find the INDIAN FIRE PUMPS purchased two years ago and mounted on our pumper are indispensable in fighting grass and many other fires. We have found them so useful that we are considering purchasing more. These fire pumps are well made; they have had hard use and perform perfectly.

Very truly yours,
JAMES ROSE,
Fire Chief.

D. B. Smith & Co.,
Utica, N. Y.

Gentlemen: In our Fire Department we use nothing but INDIAN FIRE PUMPS for a portable extinguisher, and we now have 10 of these INDIAN FIRE PUMPS in the Department. They do wonderful work for me and I recommend them highly for Fire Department use.

Yours very truly,
ALVIS W. WALL,
Chief, Fire Department.

SEND FOR NEW CATALOG

D. B. SMITH & CO., 406 Main St., UTICA, N. Y.

PACIFIC COAST AGENTS:

Hercules Equipment & Rubber Co., 550 Third St., San Francisco, Cal.
Carco-Conwhit Sales Co., 520 S.W. Pine St., Portland, Ore.
The Conwhit Co., Klamath Falls, Ore.
Mill and Mine Supply, Inc., 2700 4th Ave. S., Seattle, Wash.
Roy G. Davis Company, 617 E. 3rd St., Los Angeles, Cal.

IN CANADA: Safety Supply Co., Toronto, Montreal, Vancouver

PROTECTION
Against
ALL
Gases and Smokes

New Improved ACME
full-vision
ALL PURPOSE GAS MASK

We will gladly mail to you FREE an Acme Smoke Tester. You can easily test your present canisters yourself. If they leak smoke in a surprising quantity replace them for the safety of your men. Many other Departments have done so.

Hundreds upon hundreds of Fire Departments now have in service gas masks that are *supposed* to protect against all gases and smoke. Many of these do not protect against all gases and do not protect at all against poison smokes and poison fumes.

Firemen need not be exposed to those hazards.

The Acme All Purpose Mask protects against all gases, including deadly Carbon Monoxide (CO) and it equally protects against all possibilities of Smoke Suffocation and Fume Poisoning.

The Automatic Timer tells at a glance how much service remains in the canister.

The clear, fog-free lenses enable a man to see at all times in all directions. Weariness is eliminated by the Patented Dead Air Check Valves in the fresh air ducts. The ACME Type FD cannot cause headaches because there are no pressure points to press on the head or temples. These safety features are essential if your men are to go forward and do their work efficiently—without unnecessary risks.

Write today for further information or for a demonstration at your place.

Manufactured Exclusively By

ACME PROTECTION EQUIPMENT CO.
3604 LIBERTY AVENUE, PITTSBURGH, PENNA.

DANDUX SALVAGE COVERS

Prevent Excessive Loss from Water Damage

Thoroughly impregnated by a triple chemical process, they are light, easy to handle, and to store. Progressive Fire Departments all over the country have standardized on "DANDUX" Salvage Covers, for, unlike ordinary covers, they will not freeze or crack, even at very low temperatures, but remain soft and pliable and will not become greasy or sticky when subjected to extensive heat.

Write or phone nearest office for further information.

C. R. DANIELS, INC.
101 CROSBY STREET, NEW YORK, N. Y.
NEWARK BOSTON CHICAGO CLEVELAND DETROIT
PHILADELPHIA PITTSBURGH

Sabotage by Fire

(*Continued from page 282*)

arsonist can, by using a long candle, give himself plenty of time to get away and to establish an alibi.

Where candles are used, streamers are also commonly employed. The candle starts the fire at the source and fire travels along the streamers to different points of the building or plant.

Clockworks Not Popular

Clockworks, or clocks, have been used in the past for starting fires, but due to the fact that the evidence still remains after the fire, this type of "plant" is waning in popularity. Mechanisms may be used to release inflammable liquids on a candle or to strike a flame by scratching or rubbing a match.

One novel device found by investigators after a suspected fire consisted of a board arranged as a see-saw. On one end of the see-saw was a weight and on the other end a container with a small hole in the bottom. The container was filled with water, and upon the water draining out, the weight on the other end of the see-saw caused that end to drop, scratching a match on a piece of emory cloth. Excelsior in the neighborhood of the match carried the fire from the device to combustible materials in the neighborhood.

The use of volatile inflammable liquids has become more common by the incendiary. The volatile liquid may be placed in open containers near a source of ignition. When an explosive mixture of the liquid vapor and air is reached, there is a flash back and the liquid ignites. Highly inflammable liquids have also been substituted for liquids of less inflammability, and less volatile, in industrial processes to cause fires. Sometimes the results of such substitution are highly destructive.

Overloaded Circuits Start Fire

The use of overloaded electrical circuits, or overloaded heating appliances, has also been found effective by incendiaries in starting fires. An electric iron, without thermostatic cut-off, left on an ironing board, with the current still on the iron, may ultimately result in fire.

An overloaded electric circuit will likewise cause fire, due to the conductors becoming heated under the overload. Because the cut-off fuse protection prevents dangerously overloading circuits, the use of "jumpers" or pennies in the cut-off box, in place

of the fuse, is usually linked with overloading of the circuit.

Though eternal vigilance is the best preventive for incendiary fires, particularly those caused by the saboteur, still vigilance, no matter how faithfully carried out, will not prevent every fire of this type. Some will occur, no matter what precautions are taken. But they can be kept to a minimum by frequent inspection of a plant, insistence upon removal of rubbish, and a careful check-up of materials arriving at a plant.

The Division of Fire Safety of the State of California, in their "Report of Conference for the Purpose of Suggesting a Plan for Organiaztion of Industrial Plants and Key Industries Against Sabotage by Fire" set forth the following cooperation which should be extended by the municipal fire departments to industrial plants:

1. Cooperate fully with plant management.
2. Encourage joint inspection with plant personnel to guard against accidental and planned fires and explosions.
3. Familiarize public fire department officers with all salient features of the plant.
4. Consult with management to improve fire prevention practices and protection.
5. Cooperate fully with plant fire department in organizing drills, and during fires and explosions.
6. Familiarize public fire department personnel with processes involved in the plant and with information as how best to fight fires which occur therein.
7. Make or assist in frequent plant inspection of standpipes, first aid fire equipment, sprinklers, auxiliary equipment and appliances.

Helpful Books Issued by Insurance Company

Two helpful pamphlets have been issued by the United Mutual Fire Insurance Company of Boston, Mass. These are entitled "The Incendiary Bomb" and "The Industrial Plant Guard."

The former publication deals with the types of incendiary bombs and the methods of extinguishing them.

"The Industrial Plant Guard" is a little book describing the duties of the plant guard, both inside and outside, and also includes information on the various types of fire extinguishers with which he should be familiar as first aid fire appliances, and also fire prevention measures to follow.

Training Conference to be Held in August

Pennsylvania firemen are looking forward to the Third Annual Firemen's Training Conference, to be held for five days, August 25 to 29 inclusive, at the Pennsylvania State College.

The Conference is conducted by the Fire School, Public Service Institute. This year, over 300 persons are expected to register for the training course.

FIG. 900
2½" Shut-off Nozzle

Many leading fire chiefs the country over are wise to the special advantages offered by Buckeye Equipment. Our Roto-Rays and Whistles clear the way by night or day enabling you to get to the fire *faster* and *safer*. Buckeye Shut-Off Nozzles *will not leak* and will not shut off under pressure.

There is a complete line of Buckeye Fire Fighting Equipment. Each item is made with special care and from the best material for each particular part. You can count on Buckeye to do its part in any emergency.

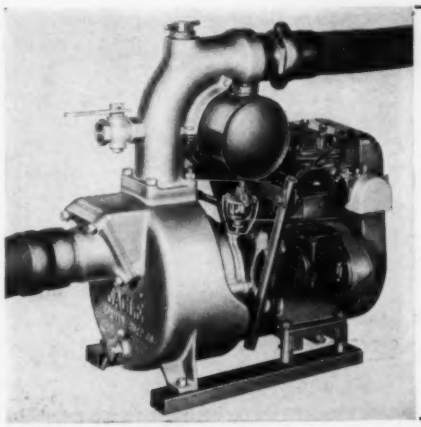
Write today for Catalog

FIG. 937
Heavy-Duty
Exhaust Whistle

FIG. 930
Junior Type Roto-Ray

BUCKEYE IRON & BRASS WORKS
DAYTON, OHIO

BUCKEYE
Shut-off Nozzles · Roto-Rays · Whistles



WHEN FIGHTING RURAL FIRES
Get water to your pumper
with this
PORTABLE BOOSTER PUMP
Pumps from Well - Lake - Stream, through 250 feet of fire hose.

- Easily carried by two men
- Occupies but little space
- The price is surprisingly low

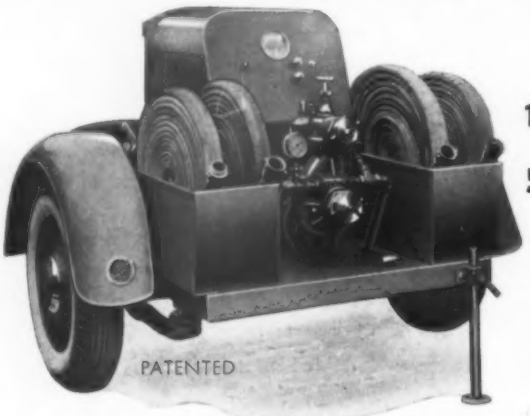
DISTRIBUTORS WANTED
Descriptive Circular Sent on Request
THE GORMAN-RUPP CO.
Mansfield, Ohio

Barton Front Mounted

AMERICAN-MARSH PUMPS

Barton-American Midship

NEW BARTON-AMERICAN TRAILER FIRE PUMPS



NINE SIZES FROM 100 G. P. M. TO 500 G. P. M.

★

120 LBS. TO 250 LBS. PRESSURE

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AMERICAN-MARSH PUMPS, INC.

Battle Creek, Michigan, U. S. A.

FIRE CHIEFS

HERE'S THE COMPLETE LINE OF QUAKER HOSE READY—

DAY and NIGHT—every SECOND

In action, each product has the highly developed fighting qualities that will make you thankful for insisting on and specifying —"QUAKER FIRE HOSE."

Takes high pressure — is flexible and easier to handle in action — coils in less space—packs in your truck more compactly . . . Absorbs the punishment when fire fighting is at fever heat—resists attacks of mildew and rot when in storage.

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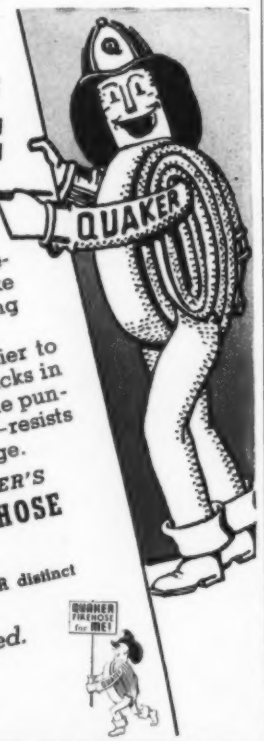
FIRE HOSE • FORESTRY HOSE

CHEMICAL HOSE

MULTIPLE JACKET HOSE made in FOUR distinct and different constructions.

Samples gladly furnished.



QUAKER RUBBER CORPORATION

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State of Minnesota Fire Hose Representative

A. H. HALVERSON • 624 E. 38th ST. • MINNEAPOLIS, MINN.

The Round Table

(*Continued from page 289*)

strikes, the properly constituted law enforcement agencies, namely, Police Department, Coroner, Sheriff, Constable, etc., would be in authority.

However, in the National Defense Program, having in mind the workings of a Fifth Column and un-American groups which might possibly cause major strikes in our defense activities to impair our production of war materials, the question of strikes would be of great concern to every Fire Chief.

As I size up the situation, the Fire Department would have its hands full in the prevention of fires along with suggestions for fire control and combat.

W. E. Jackson, Chief, El Paso, Tex.: We were once called for a street car strike, but we did not respond.

I believe that this is strictly the work of the law enforcement bodies, and do not intend to take any action of any kind.

Brooks McClure, Chief, Huntington, W. Va.: I personally do not believe that fire departments should enter into strikes or riots. This is the work of the Police Department.

George Knol, Chief, Cicero, Ill.: My personal opinion is that this work should be left to the Police Department and the militia.

Walter F. Israel, Chief, Detroit, Mich.: There are sufficient other law-enforcing agencies, and it is my opinion that the Fire Department should not be called upon in matters of this nature.

Allen Judson, Chief, Stratford, Conn.: I do not believe a Fire Department should participate in a strike unless there was a fire. If they met with interference, they could enter it.

Chris W. Noll, Chief, Poughkeepsie, N. Y.: I personally believe the job of quelling strike riots belongs to the Police Department and not to the Fire Department.

Walter S. Blanton, Chief, Savannah, Ga.: Our department has never participated in strike riots.

I do not believe fire departments should take part in such riots. Riots should be handled by the Sheriff and Police Departments, and by the Militia when necessary.

A. C. DuRee, Chief, Long Beach, Cal.: It has been our good fortune never to have been called upon to participate in strike riots of any nature.

I am emphatically opposed to the use of fire equipment or personnel in quelling strike riots.

The activities of the Fire Department are very definitely outlined and do not come within the category of quelling riots whether caused by strike or otherwise.

R. M. Hitchings, Chief, Flint, Mich.: I do not believe in having the Fire Department take part in riots.

Harry Hutton, Chief, Salem, Ore.: I believe it is up to the Police Department to quell riots.

L. B. Barnum, Chief, Phoenix, Ariz.: I do not believe the Fire Department should take part in strikes or riots.

F. L. Campion, Chief, Fargo, N. D.: A city ordinance provides that we assist police when called.

A. J. Cote, Chief, Woonsocket, R. I.: I do not believe the Fire Department should take part in strike riots.

W. P. Weeks, Chief, Battle Creek, Mich.: I do not believe the Fire Department should take part in strike riots at industrial plants.

J. A. Scruggs, Chief, Nashville, Tenn.: There is a law whereby the city has a right to call upon the Fire Department in the event of a strike or riot. However, we have never been called upon.

A. H. Bockelman, Chief, Galveston, Tex.: We have never been called on to quell strikes or riots.

I don't believe the Fire Department should take part in strikes or riots except in the case of fire.

As we are under bond, I don't believe we could refuse to take part in quelling such riots if called upon.

H. R. Chase, Chief, Miami, Fla.: I do not believe the Fire Department should be called upon for strike duty as they are not trained for such. Upon arrival at the scene of a riot, the men are subject to injury and death, and their only weapons of defense are a few tools and an empty fire hose, at least until their lines are connected.

This is strictly a function of the police or the national guard.

* * *

Answers to Previous Questions

The following replies were received in answer to a previous question on accidents in streets involving gasoline trucks:

G. R. McAlpine, Chief, Oklahoma City, Okla.: We have had nothing of a serious nature, but we have situations where it might happen. We have had one fire that caused very little damage, but it could have been disastrous. This fire started on the stage of a theatre. This theatre backed up to a second theatre, both of first class type, and the air used in the first theatre was reclaimed from the stage and reconditioned and then used in the second theatre. The fire started in the first theatre, but the smoke and heat was discovered first in the second theatre. We have also had cases where the air conditioning system picked up smoke through the intake and expelled it in the building, which is a very bad condition.

We have a full time competent man that passes on all installations, and all installations must conform to the National Board requirements.

Thomas F. Cavanaugh, Chief, Waterbury, Conn.: Our regulations provide that in all commercial refrigeration units, there shall be an emergency control switch of box and lever type, properly posted "Refrigeration Shut Off." If there is more than one refrigerator compressor, they must be wired to one emergency control switch. Gas lines must be protected in Greenfield or steel conduit, and lines in walls or floors must be in steel conduit or something similar, to the approval of the fire marshal. Everything must be suitably labeled.

E. N. Whitaker, Chief, Tacoma, Wash.: A tank truck containing 1,500 gallons of gasoline overturned at the corner of 13th Street and Tacoma Avenue. The contents of the truck immediately ignited which involved the front of a store building. The flaming gasoline flowed for a block down the hill. Several 2½-inch lines were used on the fire with the nozzles partly closed

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● Pedestrians and drivers cannot fail to hear the roar of this powerful siren, and to see the brilliant red beam of its *Oscillating Light*. The *Traffik-King* is designed especially to get you there faster and safer.

The *Oscillating Light* on the *Traffik-King* is driven by a separate motor, enabling the visible and audible signals to be operated independently, or together, as desired.

The *Traffik-King* is beautifully streamlined and chrome plated.

FREE DEMONSTRATION!
Write today for particulars, and descriptive literature.

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"Siren Headquarters"
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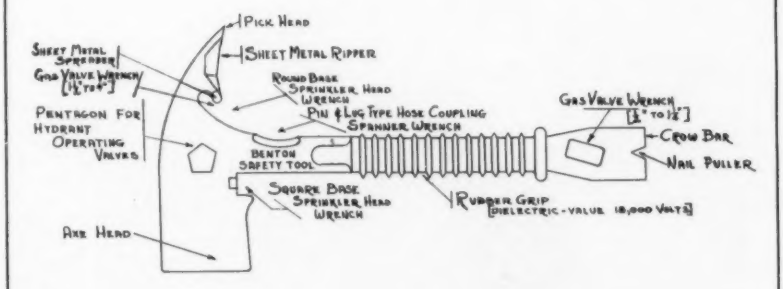
SAFETY TOOL



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ENGINEERED TO MEET ALL EMERGENCIES

Benton Safety tools were designed for that specific emergency. They combine several tools into one and the flexible uses for these tools and their interchangeability make them the outstanding tools for emergencies and of the firemanic industry.

This tool is manufactured from high grade alloys which withstand percussive blows, and a steel which holds a keen cutting edge without hazard of fracture, and a steel of high tensile strength and ductility.

We invite your inquiry for further particulars or, let our representative aid you in your new equipment problems.

BENTON TOOL CORP., CLEVELAND, OHIO

causing a spray. By back washing, we were able to separate and extinguish the flowing gasoline from the flaming truck. Three spray streams were played constantly on the tank truck. We called an auto wrecker, who stood by until the fire was extinguished, after which the truck was turned back on its wheels stopping the flow of gasoline.

This was our first experience and the methods employed proved very successful.

The following reply was received in answer to a previous question on day and night assignment of firemen:

John Griffiths, Chief, Scranton, Pa.: I believe that the day assignment of apparatus on box calls in residential and outlying business districts should equal the night assignment. I also believe that there should be more men assigned to the apparatus at night

The following reply was received in answer to a previous question on fighting brush and grass fires:

F. K. Kennedy, Jr., New Brighton, Pa.: I have been very active in this line of work for the past twelve years as a fire warden for the Commonwealth of Pennsylvania, and we find that the knapsack pumps, Rich fire rakes and such other tools as axes, shovels, etc., are the best for fighting brush fires. Back-firing when properly done is exceedingly effective.

With regard to fires which involve grass alone, I have found that there is nothing better than the use of a wet burlap sack and an ordinary garden rake. Its use is simple: Simply wet the sack, spread it out on the ground, place the garden rake in the center with the teeth up, fold the sack back over the rake teeth and use as a large mop. Grass fires can be snuffed out as fast as a man can walk in this manner. The sack will have to be wet about every 100 yards of fire, which can be done by dipping in a bucket of water. This saves dragging of hose and other strenuous methods of fighting grass fires.

The Watch Tower

(*Continued from page* 291)

street. Cause: exploding oil heater. . . . A group of Harvard students, identified as "Crimson Cult," gave a "hex" party in which Adolph Hitler was burned in effigy—as was one of the students! . . . Capt. Fred Bouchard, President Bouchard Transportation Co., New York City, is dead. He was better known as hero who towed a 4,000-ton steamer and a schooner out of danger at famous Black Tom explosion July 30, 1916. . . . At Somerville, N. J., woman, 70, who lost her sight in a fire eight years ago, was burned to death in apartment blaze. . . . A 67-year-old man of Elizabeth, N. J., died when gasoline, with which he was rubbing an injured leg, caught fire as result of his efforts to light his pipe. . . . New York City's fire loss in 1940 was $9,637,375—increase of $1,036,031 over '39; 64 killed 207 injured. . . . 42 employees of New York City dress firm were overcome, 12 sent to hospital, 30 others revived, when work room became filled with carbon monoxide gas, due to poor ventilation. . . . 200 persons in Grand Central Terminal, New York City, ran gauntlet of fumes that gave

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EMERGENCY STANDBY POWER. You're better prepared with a Homelite Portable Gasoline-Engine-Driven Generator. In case of power failure you can use this easily portable unit to maintain communications, fire or police signal alarms. Or you can use it for emergency lighting power in hospitals, public buildings, telephone exchanges, airports or other important places.

BRILLIANT PORTABLE FLOODLIGHTING. For fires or emergency repairs, a Homelite is again indispensable. With a power output of 1,800 watts, it can operate brilliant floodlights or run electric tools that are necessary for speedier repairs. In any emergency a Homelite Portable Generator is a unit that ranks first—first in peace, first in war. Your defense board will agree.

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Gives complete information on all Homelite Portable Generators

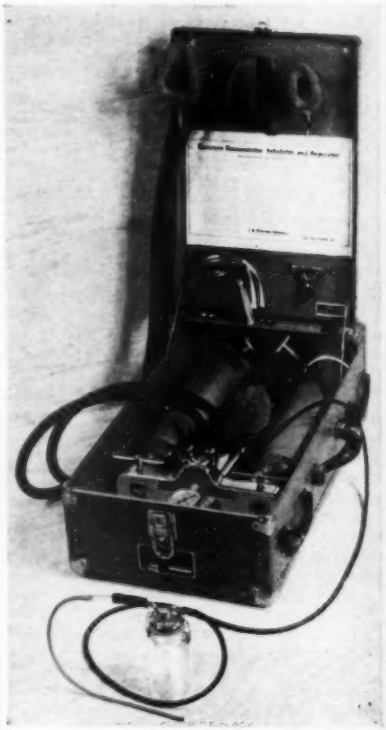
HOMELITE CORPORATION

806 Riverdale Ave., Port Chester, N. Y.

When considering an

INHALATOR or RESUSCITATOR

be sure to investigate the



EMERSON RESUSCITATOR, INHALATOR & ASPIRATOR

In your fight against asphyxial death from smoke suffocation, drowning, shock, etc., you owe it to your community to employ the most modern and effective equipment known to medical science.

See and examine for yourself our combination three-in-one apparatus.

We believe you will be glad you consulted an organization which has probably had more experience in pioneering modern improvements in various types of breathing equipment than any other in the world.

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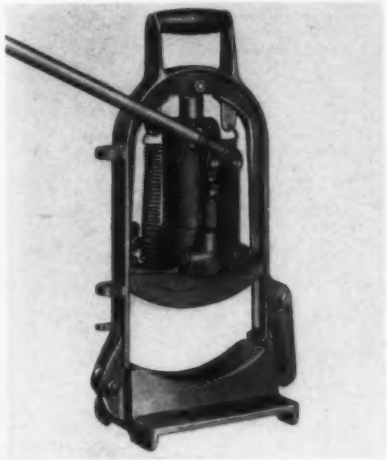
22 Cottage Park Ave.
Cambridge, Mass.

Here's New Safety for FIREMEN!



The B & L *Hydraulic* Hose Shut-off

IT stops that surge which frequently doubles pressure.

IT prevents confusion caused by shutting off wrong line.

IT reduces costly delay in closing down a line.

Designed by a Fire Captain—the principle of operation is as different from old-style clamps as modern hydraulic brakes are different from the two-wheel brakes of 1921. Here is tremendous power made gentle and easy to control. Weighing only 25 lbs. — the minimum weight providing complete safety — its frame is tested to withstand 70,000 lbs. pressure.

Easy to operate — the B & L shut-off goes over a hose in a few seconds. It cannot damage hose.

Safeguard your men and still get perfect control of water at the fire.

LANGE TRACTOR-EQUIPMENT CO. DULUTH, MINN.

Patented in United States and Canada

Didn't Believe in Signs!

Boston's worst traffic offender was discovered recently, according to our Bev'. Farms, Mass., contrib'. He's the guy (name undisclosed) who parked his jalopy directly in front of the Bowdoin Square, Boston, Mass., fire station, locked it, and calmly strolled away. Oh well, you write the finale!

* * *

Super Organizations

Bill Thompson, who scribbles fire news for Nassau County, N. Y., papers, recently pointed to difficulty of bringing together the many divided units of that county. For-example: There are in the county now, the Nassau County Firemen's Assn.; Fire Chiefs' Council; South Shore Fire Departments' Assn.; North Shore Fire Council; Nassau Veteran Volunteer Firemen's Assn.; nine "battalion district" groups and about 35 or 40 exempt firemen's benevolent associations. These are all affiliated through the Executive Council of Firemanic Associations; interlocking memberships and interlocking officials.

According to Thompson, there are 7,000 firemen in the county and he thinks there oughta be some "over-all" or "parent" organization to head up things. Good idee!

Additional Subscribers to British-American Firemen's Canteen Fund

In the April issue of FIRE ENGINEERING, the names of those contributing to the British-American Firemen's Canteen Fund were run. Since the publication of that list the following names of contributors have been received.

Brought Forward	$1,026.95
Senate H. & L. Co., Ossining, N. Y.	$3.00
Independent Hose Co. No. 6, Ossining, N. Y.	5.00
Ardsley Hose Co. No. 1, Ardsley, N. Y.	5.00
Washington Engine Co. No. 2, Tarrytown, N. Y.	5.00
Consolidated Engine Co. No. 1	10.00
Columbian Hose Co., Peekskill, N. Y.	5.00
Washington Engine Co. No. 2	5.00
Peekskill Fire Dept.	2.00
Resolute Hook & Ladder No. 1, Dobbs Ferry, N. Y.	5.00
Mr. & Mrs. Charles Sheldon, Larchmont, N. Y.	10.00
Independent Fire Co., Inc., Mt. Kisco, N. Y.	15.00
Katonah Fire Dept., Katonah, N. Y.	10.90
Hawthorne Fire Co. No. 1, Hawthorne, N. Y.	15.75
Cataract Hose Co. No. 2, Ossining, N. Y.	5.00
Union Hose & Engine Co. No. 2, N. Tarrytown Fire Dept.	10.00
Purchase Fire Dept., Inc., N. Y.	16.00
Colombia Hose Co., N. Tarrytown, N. Y.	5.00
Edw. W. Hicks, Consolidated Signal Co., Elmsford, N. Y.	5.00
Ian S. Danton, Tarrytown, N. Y.	1.00
Victor E. Parke, Tarrytown	1.00
Wm. L. Harvon, Tarrytown	1.00
T. K. Bibb, Detroit	1.00
John H. Mathens, Detroit	1.00
Harold Gross, P. O. Dept., Tarrytown, N. Y.	.05
Hook & Ladder, No. 1, Harrison, N. Y.	10.00
Harrison Exempt Firemen's Ass'n.	5.00
Engine & Hose Co., No. 1	10.00
Chemical & Patrol Co.	10.00
Members of Paid Dept., White Plains N. Y.	72.50
Hook & Ladder No. 1	10.00
Hook & Ladder No. 1	12.00
Chatterton Engine Co. No. 5	25.00
Chatterton Engine Co. No. 5	31.00
East Side Co. No. 3	10.00
East Side Co. No. 3	3.70
Independent Engine No. 2	10.00
Independent Engine No. 2	3.50
Hope Truck Co. No. 1	5.00
Hope Truck Co. No. 1	5.00
Fire Patrol No. 1	5.00
Fire Patrol No. 1	4.30
South Side Engine No. 4	10.00
South Side Engine No. 4	7.75
Exempt Firemen's Ass'n.	5.00

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VALVES HYDRANTS *and* PIPE LINE ACCESSORIES

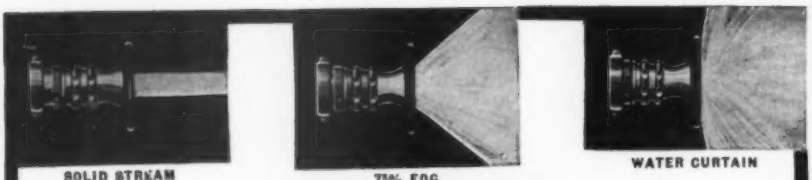
A. W. W. A. HYDRANTS ***Underwriters Approved***

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

M & H Fire Hydrants are dry top and revolving head. They are easy to lubricate. Maintenance costs are low, due to simplicity of design and rugged construction. They have low friction loss and great efficiency because barrel diameter is not reduced and there are no working parts or obstruction in waterway. Special Traffic model is designed to yield at the ground line under impact. Repair is simple and easy by renewing breakable bolts and breakable coupling on stem.

M & H VALVE AND FITTINGS COMPANY

ANNISTON, ALABAMA



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ELKHART'S
MYSTERY
NOZZLE

NO MOVING PARTS

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A UNIVERSAL NOZZLE

NOT MERELY A FOG NOZZLE

The Mystery was the first real combination fog, water curtain and straight stream nozzle, made available to fire fighters.

Now, after three years' widespread acceptance by fire departments and industrial organizations, its superiority has been established.

Let us send you descriptive literature.

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Chief Griffen	.25
Protection Engine Co. No. 1, Hastings on Hudson	10.00
Uniontown Hose Co. No. 2	5.00
Riverview Manor Hose Co. No. 3	20.00
J. W. V. ch No. 32	16.00
Hook & Ladder Co. No .1	10.00
J. W. V. ch No. 32	1.00
J. W. V. ch No 32	5.00
Exempt Firemen's Ass'n, New Rochelle, N. Y.	10.00
Rotary Club, Tarrytown, N. Y.	20.75
Larchmont Fire Dept.	1.40
S. Brady, N. Tarrytown, N. Y. (Chevrolet Motor Co.)	1.00
John Moore, Sr., Tarrytown, N. Y. (Colidated Co.)	1.00
Joseph Moore	1.00
Wm. T. Montgomery (Chevrolet)	.25
Elmsford Fire Dept.	15.00
Elmsford Fire Dept.	2.00
Bronxville Engine & Hose No. 3	10.00
Lions Club of Tarrytown, N. Y.	10.00
Mamaroneck Hook & Ladder Co. No. 1	5.00
Commissioner Thos. P. Foley, White Plains	10.00
Exempt Firemen's Benevolent Ass'n, Hastings	8.00
Chief Oscar Grab, New Rochelle, N. Y.	2.00
Alfred Kunge, New Rochelle, N. Y.	1.00
Firemen Ed. Stowell, New Rochelle, N. Y.	1.00
Goldenbridge Fire Dept., Engine Co. No. 1	5.00
Firemen's Benevolent Ass'n, Valhalla, N. Y.	5.00
South Salem Fire Dept., N. Y.	10.00
Individuals of Rye, N. Y.	2.80
Max L. Blatz, Eng. Co. No. 6, Mt. Vernon Fire Dept.	1.00
Chief Omme, Mt. Kisco, N. Y.	14.50
Bedford Hills Fire Dept., Inc., N. Y.	25.00
Hill Top Engine Co., No. 1, Pocantico Hills, N. Y.	5.00
Chief Chester A. Dobbs, Scarsdale Fire Dept., N. Y.	2.00
Rotary Club, Scarsdale, N. Y.	5.00
Croton Fire Patrol Co. No. 1, N. Y.	5.00
Elmsford Fire Dept., N. Y.	7.00
Ladies Auxiliary Rescue Hose Co., N. Tarrytown, N. Y.	10.00
Riverside Hose Co., Tarrytown, N. Y.	3.00
(James J. Taxter—$1.00. Raymond Edlesa—$1. Thomas Vincent—$1.)	
Mt. Vernon Fire Dept. Truck Co. No. 3	$2.50
Uniformed Firemen's Ass'n, Mt. Vernon	10.00
Chief John Gibson (Fire Dept.)	6.00
	18.50
Yonkers Fire Dept., Headquarters	15.50
Eng. 2, Truck 2, Yonkers Fire Dept.	6.00
Eng. 3, Yonkers Fire Dept.	1.00
Eng. & Truck 4, Yonkers Fire Dept.	9.00
Engine 5—Yonkers, N. Y.	2.00
Engine 6—Yonkers, N. Y.	3.00
Engine 7—Yonkers, N. Y.	5.00
Engine 8—Yonkers, N. Y.	1.50
Engine 9—Yonkers, N. Y.	1.75
Engine 11—Yonkers, N. Y.	4.00
Engine 13—Yonkers, N. Y.	3.00
Telegraph Bureau, Yonkers	1.25
Yonkers Paid Fire Dept.	50.00
John M. J. Mackenzie, Yonkers N. Y.	5.00
Mr. & Mrs. James Moore, Yonkers, N. Y.	2.00
Lions Club of Yonkers, N. Y.	25.00
Wm. N. Ensign, N. Tarrytown, N. Y.	10.00
Nicholas Fallace, Jr., Somers, N. Y.	.50
Pound Ridge Fire Dept., N. Y.	6.15
Conqueror Hook & Ladder Co. No. 1, Tarrytown, N. Y.	10.00
Mrs. Arthur Ginniver, "Polly," New Rochelle (Per: R. B. W.)	5.00
Katonah Fire Dept., N. Y.	7.00
Unnamed member—Yonkers Fire Dept.	.25
Mr. & Mrs. E. I. Graff, Larchmont, N. Y.	.20
Andrew DelCollo, N. Pelham Fire Dept	3.00
Fire Bell Club, New York City	10.00
McGraw Hill Publishing Co., Employees (Per: R. B. W.) N. Y. C.	4.83
Chemical Engine Co. No. 4—Mt. Vernon, N. Y.	5.00
Hon. Congressman Ralph Gamble	1.00
Chief Brooks, Dobbs Ferry, N. Y.	1.00
Mrs. Wm. Webb, Tarrytown, N. Y.	1.00
Ossining Fire Patrol, Ossining, N. Y.	2.50
Livingston Hose Co. No. 1—Dobbs Ferry, N. Y.	5.00
Washington Engine Co., Croton on Hudson, N. Y.	5.00
Fairview Engine Co. No. 1, Fairview, N. Y.	5.00
Lion's Club of Mt. Vernon	10.00
Rotary Club—Hastings, Dobbs Ferry and Ardsley, N. Y.	5.00
Fire Chiefs' Emergency Plan	38.28
Rescue Fire Co., Cambridge, Md.	10.00
The Vienna Vol. Fire Co., Inc., Vienna, Md.	15.00
Tasley Vol. Fire Co., Tasley, Va.	5.00
Berlin Fire Co., Berlin, Md.	5.00
Lewes Fire Dept., Inc., Lewes, Del.	10.00

Dorchester Co. Volunteer Firemen's Ass'n Credit Rescue Fire Co., Cambridge, Md.	5.00
Queenstown Vol. Fire Co., Inc., Queenstown, Md.	5.00
Preston Volunteer Fire Co., Preston, Md.	5.00
Stockton Fire Co., Stockton, Md.	2.50
Seaford Vol. Fire Dept., Seaford, Del.	25.00
Blades Vol. Fire Co., Inc., Blades, Del.	10.00
Secretary Vol. Fire Co., Secretary, Md.	20.00
Trappe Fire Co., Inc., Trappe, Md.	5.00
Hurlock Vol. Fire Co., Inc., Hurlock, Md.	10.00
Selbyville Vol. Fire Co., Selbyville, Md.	5.00
Chincoteague Vol. Fire Co., Inc., Chincoteague, Va.	5.00
Total Deposits made to 5/2/41	2,122.16

The contributions from Maryland, Delaware and Virginia included in the above list were raised through the efforts of J. Emory Parks of Cambridge, Md.

Rockland County Holds Mock Mobilization

The third annual convention, mock disaster mobilization, parade, first aid contest, and banquet of the Rockland County Emergency and First Aid Council, Inc., were held in Nyack, N. Y., an May 17. Response was had from as far north as Norwood, N. Y., near the Canadian border, to as far south as Alexandria, Va.

The "ball started rolling" around one p.m. when W. B. Page, Chairman of the Disaster Unit of Nyack Chapter, American Red Cross, sounded signal 2-2-2 which is the disaster alarm. Shortly thereafter, the parade was under way in which the following units participated, several bands and American Legion units; Nyack Hospital Emergency Unit; Rescue Squad No. 1, Alexandria, Va.; Nyack Community Ambulance, Suffern, N. Y.; Ambulance, Emergency Unit of the Rockland Light and Power Company, Lakewood, N. Y.; First Aid Squad, Disaster Unit of the Rockland Coaches Inc., Katonah, N. Y.; Emergency Unit No. 1, Spring Valley, N. Y.; Emergency Unit, Nanuet, N. Y.; First Aid Unit, Closter, N. J.; Rescue and Salvage Company, Piermont, N. Y.; Rescue Unit, Sparkville Palisades Rescue Unit; Pearl River Engine Company; the Nyack Fire Patrol; Lederle First Aiders; and a few units of the Nyack Fire Department. At a point near Memorial Park the mobile units separated from the marching units, the latter going directly to the park and the mobile units congregating at some point in the city.

A large crowd assembled at the park to witness the program which was started with the dispatching of the various mobile units from another part of the city via short wave radio. An airplane was dispatched via radio from a nearby airport. On arriving over the park, safety leaflets were dropped from the plane, then it was instructed to fly over the Nyack hospital, dispatch two ambulance units, and then report the progress of these units to the park by radio.

Demonstrations that were presented include: The rescue of a person from the Hudson River by Sea Scouts; pole top resuscitation of a lineman who had supposedly come in contact with high tension wires; messages sent by carrier pigeons; parade drills; first aid demonstrations by Boy Scouts, Girl Scouts, Lederle First Aid Girls, and Rockland State Hospital; extinguishing a gasoline fire using carbon dioxide, with the men being protected from he heat by asbes-

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- - - - and your complete pumping engine will be thoroughly engineered for a high standard of performance and reliability.

Write today for the catalog and folders on the complete line of Hale Pumps.

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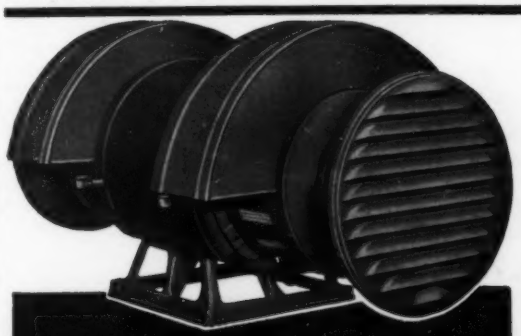

STERLING MODEL "M"
GENERAL ALARM SIREN
You Can Depend On It *ALWAYS*

A Friend in Need

The Sterling Model "M" is truly a "Friend in Need." Always ready to be of service night or day. A friend you can depend upon always. It is efficient, so much so that for many years it has been used exclusively by departments requiring a public alarm system.

Write today for further information, specifications and prices.

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

The WHEAT SPOTLIGHT

. . . a MUST under the NATIONAL DEFENSE PROGRAM

The National Defense Program has caused fire departments to demand economic, efficient and enduring equipment.

The WHEAT Spotlight with its 25,000-candlepower light and its 1,000-hour endurance battery surely comes under this heading. It is invaluable to all departments, large or small, because of its light weight and convenient shoulder strap which allows its operator the full use of both hands on other duties.

Write today for full information.

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USE Shuredry SALVAGE COVERS

Control loss from water damage by the use of SHUREDRY SALVAGE COVERS.

Thorough drill in their use as covers and catchalls will improve your department's record. Light and easy to handle, they do not freeze even at very low temperatures and will not crack when folded for storage.

Write for information and prices.

FULTON BAG & COTTON MILLS
Manufacturers Since 1870
Atlanta St. Louis Dallas New York
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tos suits; a mock hospital base organized and maintained by physicians; and rescues affected from a building by the Nyack Hook and Ladder Company. One of the demonstrations presented by the Boy Scouts was supposedly to take place during a blackout. In this demonstration, Boy Scouts administered first aid to a companion while blindfolded.

Toward the latter part of the afternoon, a first aid contest was sponsored in which the teams participating were given a standard Red Cross manual problem to work out. The teams were judged on the speed with which they completed the problem and the quality of the completed work.

On hand to witness the afternoon's program were several notables among whom were Alfred Roelher, Civilian Aide to Secretary of War from New York State; Dr. P. J. Flagg, President-Director of the Society of Prevention of Asphyxial Death, Inc., and several others from Orange and Duchess Counties. The day's program culminated in a banquet at the Hotel St. George, Nyack. The guest speaker was W. E. Haskell, Assistant to the President of the "New York Herald-Tribune."

Among those on the Committee of Arrangements were Raymond "Happy" Gray, Chief of Nyack Police, who was Committee Chairman, Captain Wm. Paul Babcock, Editor of "The Blanket," which is published by the Rockland County Emergency and First Aid Council, Inc., and C. Ray Ackerman, President of the Council.

Civil Defense Board

(*Continued from page* 285)

the national morale and to provide opportunities for constructive civilian participation in the defense program; review and approve all civilian defense programs of Federal departments and agencies involving the use of volunteer services in order to assure unity and balance in the application of such programs; and assist state and local defense councils or other agencies in the organizations of volunteer service units and in the development of their activities.

F. Maintain a clearing house of information on state and local defense activities in co-operation with appropriate Federal departments and agencies.

G. Review existing or proposed measures relating to or affecting state and local defense activities, and recommend such additional measures as may be necessary or desirable to assure adequate civilian defense.

H. Perform such other duties relating to participation in the defense program by state and local agencies as the President may from time to time prescribe.

3. The director may provide for the internal organization and management of the Office of Civilian Defense. He shall obtain the President's approval for the establishment of the principal subdivisions of the office and the appointment of the heads thereof.

4. There shall be in the Office of Civilian Defense a board for civilian protection (hereinafter referred to as the board) to be composed of the director as chairman and a representative of each of the following departments and agencies of the Federal government to be designated by the heads thereof: Department of War, Department of the

JANESVILLE QUALITY FIRE COATS

Our coats are giving excellent satisfaction in most of the large fire departments throughout the U. S. and THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

Rubber and Duck Coats and Bunkers, Boots, etc.

We also manufacture White Striped Safety Coats.

Write for illustrated folder.

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JANESVILLE, WIS.

The INVINCIBLE NOZZLE

INVINCIBLE NOZZLES are known the world over, for their superior construction. Each nozzle is individually tailored to assure very best operation.

THE McINTIRE LINE
The Invincible Nozzle
Shut-off Nozzles and Play Pipes
All Types of Sliding Poles
Hydrant and Wagon Gates
Fire Department Sundries
Portable and Deluge Sets

QUALITY PRODUCTS at fair prices

"If it's Brass — Try Us"

F. N. McINTIRE BRASS WORKS
Successor to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837—1941

Navy, Department of Justice, Federal Security Agency, and such others as the President may from time to time determine. In addition, each of the following organizations shall be invited to designate a representative to serve as a member of the board:

A. The Council of State Governments.

B. The American Municipal Association.

C. The United States Conference of Mayors.

The board shall advise and assist in the formulating of civil defense programs and measures, appropriate to the varying needs of each part of the nation, designed to afford adequate protection of life and property in the event of emergency. The members of this board shall serve as such without compensation, but shall be entitled to actual and necessary transportation, subsistence, and other expenses incidental to the performance of their duties.

Volunteer Committee

5. There shall be in the Office of Civilian Defense a volunteer participation committee (hereinafter referred to as the committee) consisting of the director as chairman and not more than twenty members, representative of the various regions and interests of the nation, to be appointed by the President. The committee shall serve as an advisory and planning body in considering and developing programs designed to sustain national morale and to provide opportunities for constructive civilian participation in the defense effort. The members of the committee shall serve as such without compensation, but shall be entitled to actual and necessary transportation, subsistence and other expenses incidental to the performance of their duties.

Additional Committees to Be Added

6. The director is authorized, with the approval of the President, to appoint such additional advisory committees and subcommittees, with respect to state and local cooperation, national morale, civil-defense planning, civilian participation and related defense activities, as he may find necessary or desirable to assist him in the performance of his duties. Such advisory committees may include representatives from Federal departments and agencies, state and local governments, private organizations and the public at large. The members of the advisory committees shall serve as such without compensation, but shall be entitled to actual and necessary transportation, subsistance and other expenses incidental to the performance of their duties.

7. Within the limitation of such funds as may be appropriated to the Office of Civilian Defense, or as may be allocated to it by the President, through the Bureau of the Budget, the director may employ necessary personnel and make provision for the necessary supplies, facilities and services. However, the Office of Civilian Defense shall use statistical, informational, fiscal, personnel and other general business services and facilities as may be made available to it through the Office for Emergency Management or other agencies of the government.

YOUR BADGE
A SYMBOL OF HONOR

Your badge represents a symbol of courage and unselfish devotion to duty. You, who have devoted your lives to saving the life and property of others should be proud of your badge.

You can be—if it is a Braxmar badge, for skilled metal craftsmanship on quality metals give them the fine appearance you want in your badge.

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Standard for over 60 years

SEALAND CENTRIFUGAL PUMPS

Give your community the extra protection assured by the new Sealand midship-mounted, power take-off centrifugal pump.

The new Sealand can be used either as an auxiliary booster pump or as the sole means for community fire fighting service.

It comes in either 150 gallon or 300 gallon capacities, delivery pressures from 120 lbs. to 400 lbs., and is adapted to use either ¾" or 1" chemical hose, or 1½" or 2½" fire hose.

It is so inexpensive, your budget can afford it. Write today for further details.

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485 Pages Profusely Illustrated

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THE FIRE CHIEF'S HANDBOOK
By FRED SHEPPERD

Gives a practical, authoritative answer to almost every question that might come up in modern fire fighting practice.

A valuable reference guide for the progressive fire chief, and, too, for the fire fighter studying for promotion.

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MIDWESTERN FIREMAN'S COAT
With Detachable Lining

This coat, furnished in different materials, has as a special feature a detachable lining, of pure wool. This feature makes it adaptable to all conditions of weather and assures you of the warm, dry protection that only MIDWESTERN can offer, for only $14.20.

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COVER'S NOD and SHAKE SMOKE MASK

Carry It in Pocket. Slip on in a Jiffy. Positive Protection to Eyes Against Smoke and Saves the Lungs.

WHY GET SICK?

Price $48 per Dozen

Upon receipt of $4.00 one will be forwarded as a sample postpaid.

H. S. COVER
Station A, South Bend, Ind.

Correspondence

(*Continued from page 298*)

so many curious persons travelled to Jersey City to watch a fire that reminded many of London's "blitzkrieg" fires.

BILL HERRIES
New York City

Masks for Tear Gas Protection

To the Editor:

Your recent article on "Tear Gas Protection" and the recommendation of the use of oxygen breathing apparatus has evidently raised a doubt in the minds of many users of our Bureau of Mines Approved All-Service Gas Masks as to its ability to protect against Tear Gas. We would like to point out that the MSA All-Service Gas Mask, Bureau of Mines Approval No. 1405, will furnish this protection.

We have been furnishing canister type masks for many years for military and police use and we, as well as the armies of the World, have found canister type masks entirely adequate for tear gas protection.

Mine Safety Appliances Co.
GEORGE L. SETH
Assistant Manager,
Industrial Department.

Mainzer Should Receive Recognition

To the Editor:

In the interest of accuracy and good reporting, may I rise to correct the concluding paragraph on Page 252 of the May issue of FIRE ENGINEERING. The man who "conceived" the first Rescue Company in the New York Fire Department was the late Honorary Deputy Chief Robert H. Mainzer.

Official cognizance is given to his contribution to the progress of fire fighting in the annual report of the New York Fire Department for the year 1915. On page 41, the then Commissioner Robert Adamson told about Chief Mainzer's research and surveys of rescue companies in the fire brigades of the capitals of Europe, and also of Mr. Mainzer's report of that survey which actuated the New York Fire Department to organize its first rescue company along lines suggested by Chief Mainzer.

Rescue Co. No. 1 in New York was organized March 8, 1914 and the late Chief John Kenlon selected Captain John J. McElligott of Truck Co. No. 1 to be its first commanding officer.

WM. JEROME DALY
New York City.

A Reader Since 1888

To the Editor:

Enclosed please find remittance for renewal to FIRE ENGINEERING.

I sure do not want to miss an issue as I value it too much. I knew it first as "Fire and Water" in 1888 when I went into the Montreal Fire Department under Chief Benoit for twenty-eight years. I got knocked out for keeps in 1916, spent two years convalescing and then back to my old love.

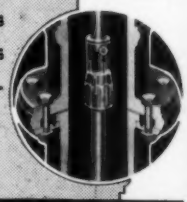
All we get here are grass and brush fires, a cinch for an old timer from the Montreal Fire Department.

I am in charge of equipment and ranger's pumps and hose repairing, etc.

Hoping to last out my two years anyway, making my number seventy-four,

THE SAFETY FLANGE SAVES TIME & MONEY

In case a MUELLER-COLUMBIAN Hydrant should be struck a hard enough blow to cause damage, the Safety-Flange Section parts, allowing the top barrel section to fall harmlessly to the ground. All vital parts are protected from damage. There is no flooding of streets and the hydrant can be completely repaired by the installation of another Safety-Flange and Couplings. This is done by one man in in a few minutes time and requires no digging or water shut-off.



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ARMING AMERICA AGAINST FIRE

★ Proper National Defense demands the use of Dependable Fire Fighting equipment and materials.

★ We offer only the best quality material and equipment available for the particular job—dependable products that will perform fully when the occasion demands.

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★ Write for our latest catalog today if you do not already have one.

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New York, N. Y.

"INITIATIVE"

YES—WE HAVE IT AND ARE USING IT. LOOK FOR THE "TRUMPET" ON YOUR NEXT PURCHASE OF FIRE EQUIPMENT. WATCH FOR CIRCULARS NOW IN PRINT FOR A COMPLETE LINE OF "FIRE SUPPLIES" ENGINEERED AND MADE BY AN ORGANIZATION THAT KNOWS HOW AND WHOSE PERSONNEL HAS ALREADY CONTRIBUTED EIGHTEEN PATENTS TO FIRE INDUSTRY AND HAS SEVERAL ADDITIONAL PATENTS PENDING.

HOSE BRASS GOODS WB LINE THE WOOSTER BRASS CO. WOOSTER, OHIO

EVERYTHING
TO FIGHT FIRES!

PORTABLE CUTTING EQUIPMENT
Light . . . easy to carry . . . cuts steel *fast*.

KEROSPHERE FIRE PUMPER DISCHARGE VALVE
Positive . . . adjusts smoothly at high pressure—non-creep . . . non-corrosive.

85,000 C. P. ULTRALITE
Guaranteed bright at ¼ mile . . . light . . . one-hand operated . . . long-life battery.

NEW SQUAD WAGON
Big, rugged, high speed—contains every emergency tool—all of above equipment and 275 other necessities *built-in*.

KEROTEST MANUFACTURING CO. PITTSBURGH, PA.

and awaiting my next issue of FIRE ENGINEERING.

Yours very truly,
CAPTAIN FRED H. MOTT,
P. O. Box 57,
Timiskaming, Que.

P. S. Only wish I was in London with the boys.

Safety Board Urged for Connecticut

A special investigating commission urged the members of the Connecticut General Assembly on May 15 to adopt a seven-point program including the creation of a fire and safety board in the State Labor Department, "to prevent and eliminate dangers from fire hazards."

The Commission, appointed after the disastrous New Haven factory fire which cost ten lives in February at the plant of the New Haven Quilt and Pad Company, said in a forty-page report it found there was an "overlapping of our present statutes, lack of authority, non-umformity of codes, division of reporting duties, and limited staff assistance."

In addition to the fire and safety board, a three-man body appointed by the Governor with jurisdiction over hazards in manufacturing and mercantile establishments, the Commission proposed:

"Continuation of the State Fire Marshal's office within the State Police Department, with broadened powers to investigate 'the causes, circumstances and origin of all fires and explosions to which his attention has been called.'

"Coordination of state and local enforcement activities of fire and safety laws, with the exception of those delegated to the new board, under the State Fire Marshal, a post held by the State Police Commissioner.

"Requiring the appointment of local fire marshals by municipal governments to investigate fires and report to the State Fire Marshal, and make inspections to uncover hazards.

"Authorizing the State Fire Marshal to prepare and enforce 'reasonable regulations' for the safe storage and transportation of inflammable fluids.

"Amendments strengthening laws relating to the placing of fire escapes on schools and other public buildings.

"Authorizing municipalities to assist each other 'in the protection of life and property endangered by fire or explosion, or to assist in suppressing any conflagration' and protecting benefit rights of firemen and policemen injured or killed while engaged in such duty."

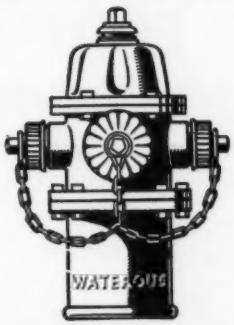
THOMAS F. MAGNER.

Doughnut Bakery Razed

A loss of $3,500,000 was announced by officials, after fire had swept through the seven-story plant of the Doughnut Corporation of America on May 27. The plant is located in Ellicott City, about ten miles west of Baltimore. Fire was discovered in a lumber pile in the rear of the plant. From this lumber, the fire spread to eleven freight cars and then into the factory.

The four units of the Ellicott City Fire Department responded under Chief B. H. Shipley, and found a large part of the building on fire, although it had been burning only a few minutes. A general alarm brought five pumpers of

WATEROUS FIRE HYDRANTS



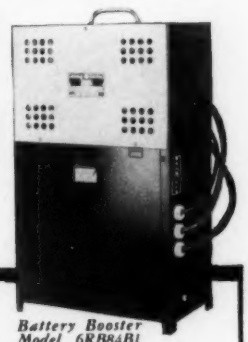
DEPENDABLE PERFORMANCE

Dependability is built into every detail of the Waterous Hydrant. Protected operating threads, all-bronze drain, lubricated mechanism and rugged design are but a few examples. We will gladly tell you more about this dependable fire hydrant. Send for catalog.

Waterous Dependable

WATEROUS COMPANY
SAINT PAUL

HERE'S REAL HELP FOR YOU



Battery Booster Model 6RB84B1 110 volts, 60 cycle

THIS new General Electric Battery Booster with its 40-ampere output charges a 6-volt battery IN THE TRUCK in less than two hours.

Sturdy, reliable, rugged, but low in price, this new Booster is tailor-made for fire departments with modern ideas about equipment maintenance.

If you'd like more information, just write to Section A-1586, Appliance and Merchandise Department, General Electric Company, Bridgeport, Connecticut.

GENERAL ELECTRIC

EDDY

Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the Facts

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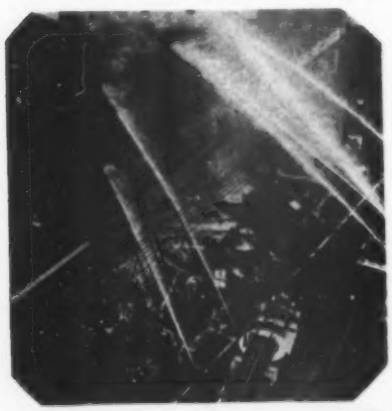
Waterford, N. Y.



WHERE PRESSURE COUNTS

Flames roaring from the upper floors and the battle is on. PRESSURE is the one vital factor that you depend on in fighting such fires. If the mains in your city are clogged with incrustation you are *not* getting full pressure. RECOMMEND A NATIONAL CHECK-UP of the water distribution system in your city —everybody will benefit.

NATIONAL WATER MAIN CLEANING COMPANY

30 Church Street, New York, N. Y.

the Baltimore County Paid Fire Department, as well as half a dozen volunteer companies. The Fire Department of Baltimore City also sent five pumpers and two aerials under Battalion Chief Joseph Twilley.

The cereal plant on the first floor of the building caught fire and communicated the fire to the flour mill, and then roared up to the seventh floor where more than 300 drums of fat shortening, each containing 450 pounds, were stored. Heat conditions on the seventh floor were so bad that firemen had to be relieved, every few minutes, or abandon their lines. Dust explosions cracked some walls, while huge steel sash frames were twisted out of the walls in other places by the intense heat. Eight concrete elevators, containing 300,000 bushels of wheat, were saved. Chief Maisel of Baltimore County was in charge of operations at the fire. He was assisted by Asst. Chief Wilbur Kelly of Baltimore County, Chief B. H. Shipley of Ellicott City, and Battalion Chief Twilley of Baltimore. Overhauling operations took several days.

OTIS SMITH.

San Francisco Has Fire Series

A series of fires recently hit San Francisco, doing considerable damage and injuring one fireman.

A night fire severely damaged equipment and machinery worth $10,000 in the National Metal Company and destroyed metal products worth $3,500. The company holds defense contracts for magnesium products. An explosion preceded the fire according to employes. It was believed to have been caused by acetone fumes reaching a gas heater.

Firemen, aided by a heavy rain, succeeded in preventing spread of flames which gutted the interior of a spaghetti and macaroni factory at 970 Bryant Street. The fire started early in the morning and had gained great headway in the three-story frame building before an alarm was received.

Four alarms and a special call for water towers were pulled by Chief Charles Brennan, who estimated the damage at $65,000. The fireman who was injured, Carl Brussell, was hurt at this blaze.

Fire starting in a linen chute on the second floor shot up through the eight-story Keystone hotel at the busy noon hour. The hotel is on Fourth Street, just south of Market Street. Few guests were in their rooms at the time but Chief Brennan called for a second alarm and two extra truck companies as a precautionary measure. The extra equipment was not needed, however, for Lt. William Lindecker and his men, of Engine 17, fought their way through acrid smoke to douse the flames. Damage was nominal.

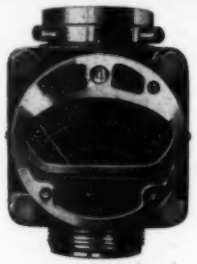
BOB GREENOCK.

Howser, Chief at Air Base

Deputy Chief Clarence G. Howser of the Concord, N. H., Fire Department, had been granted a leave of absence to accept a position as Fire Chief at the U. S. Army Air Base in Manchester.

Chief Howser joined the Concord Fire Department in 1915 as a permanent man for three years. For six years he was a call fireman, returning as a permanent member in 1924. For eight years he has been Deputy Chief.

NOZZLE PRESSURES



ARE SHOWN *CONTINUOUSLY AT THE PUMPER* BY THE MJL

PRESSURATER

AN ESSENTIAL DEVICE FOR EFFICIENT FIRE FIGHTING

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MOREY & JONES, LTD.

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ATTENTION DEALERS! TERRITORY STILL AVAILABLE

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HELMETS

Made in Regulation or Drop Brim styles, in both leather and aluminum, in sizes and weights to suit all preferences, and incorporating all the best safety features.

Write for information on our special light-weight leather "Defense" Helmet, which fills the need for extra helmets where the appropriation does not permit the more expensive standard styles.

Write for Catalog 30A

CAIRNS & BROTHER

444 LAFAYETTE STREET NEW YORK

"The Superior"
A MODERN and PROVEN
LIFE NET

The SUPERIOR LIFE SAVING NET is stronger than any other, because of the tested breaking strength of 1,800 lbs. of each individual rope.

The direct pull shock absorber system eliminates all friction and its greater resiliency provides for a safer, easier landing.

Made of Chrome Molybdenum steel, the frame may easily be folded for storage within a few seconds.

For the utmost in LIFE SAVING VALUE .. "SPECIFY SUPERIOR"

For ECONOMY, have your old net converted into a "SUPERIOR".

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Other SUPERIOR Products:
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FIRE ALARM BOXES

are high quality boxes in every detail. Made of cast aluminum inside as well as out, they make for light, fast and easy installations and long, corrosion-free service.

Equipped with quick action doors, furnished to meet every specific requirement. They are quick acting and non-interfering of the shunt and successive type.

Send today for Bulletin 20 and prices.

HARRINGTON SIGNAL CO.
Moline, Ill.

New York Chiefs Have Big Meeting

The New York State Association of Fire Chiefs held its annual convention in Utica, N. Y., on May 19 to 21 inclusive. The meeting was featured by the biggest attendance in recent years, nearly 200 having registered.

A very effective program was arranged by the Secretary, Chief Chris W. Noll of Poughkeepsie, and the convention details at Utica were handled in a highly efficient manner by Joseph N. Sullivan, Commissioner of Public Safety.

The forenoon of the first day was occupied by routine business of the association, and in the afternoon the technical program was taken up.

Chief Leon H. Ingersoll, of Cincinnatus, N. Y., spoke on "Why the Rural Fire Chief Should be a Member of the New York State Fire Chiefs Association," and advanced very convincing arguments for such membership.

T. Alfred Fleming on Program

In discussing "Chemical Fire Hazards in Industry," T. Alfred Fleming, Chief of Conservation, National Board of Fire Underwriters, reviewed some recent developments in industry which brought about severe fire and life hazards due to new chemicals and processes employed. Mr. Fleming made recommendations for combatting these hazards.

Following Mr. Fleming's paper, Fred Shepperd, Editor of FIRE ENGINEERING, reviewed the subject of simplified hydraulics as applied to fire departments.

The morning session of the second day was also taken up with routine business and two interesting papers. The first, "National Defense through Fire Defense," was presented by John Ashmead, General Manager, Phoenix Insurance Company of Hartford, Conn. The second, on "Fire Setting by Incendiary Bombs, and their extinguishment," was presented by J. E. Tiffany, Explosives Testing Engineer, Explosive Division of the U. S. Bureau of Mines, Washington, D. C.

The afternoon of the second day was devoted to exhibits and demonstrations of apparatus.

The final session, held on Wednesday, May 21, included two interesting papers. The first by Chief Paul F. Heinz, New Haven, Conn., discussed the subject of "Arson." The second paper was by Captain Edward F. Curren, Fire Marshal's Office of the Fire Department of New Haven, Conn., and in it he discussed "Fire Department Education Concerning Fire Prevention."

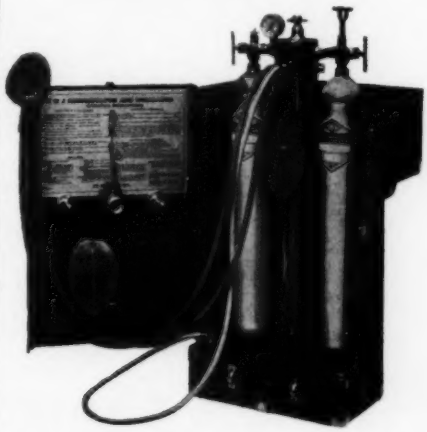
Osbourne G. Smith, Former Chief of Larchmont, N. Y., was elected President for the coming year, and Rochester, N. Y., was selected as next year's convention city.

The entertainment provided by Commissioner Sullivan proved highly successful. The bingo party and dance, the get-to-gether banquet and sightseeing trips were all highly popular.

New Equipment for Great Falls

At a recent election the voters of Great Falls, Mont., put over a bond issue to buy three pieces of fire apparatus, two pumpers and an aerial truck, and also to build a new station in the eastern part of the city.

The E & J
RESUSCITATOR
INHALATOR and
ASPIRATOR



The Fire Department of one of the largest cities in the world has used the E & J Resuscitator in over 5,000 cases of respiratory failure.

Two and one-half years of research with the E & J Resuscitator by an outstanding Medical Scientist is considered the foremost study in the treatment of Advanced Asphyxia.

A majority of the leading Medical Schools have adopted this apparatus for the treatment of respiratory failure in their teaching hospitals.

The E & J is standard equipment in the plants of the five largest industrial organizations.

Five years of intensive investigation by the American Medical Association resulted in the acceptance of the E & J Resuscitator by that organization.

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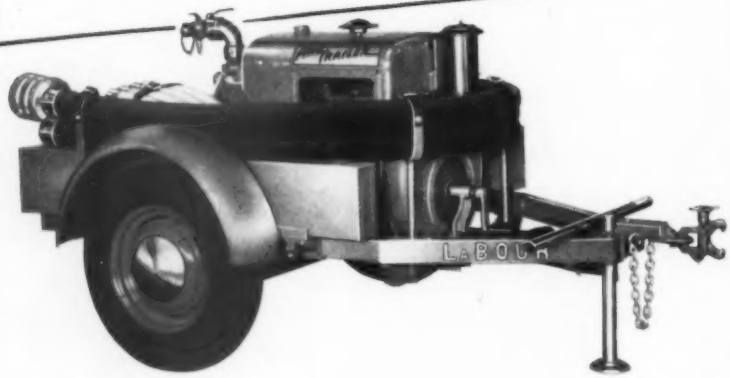
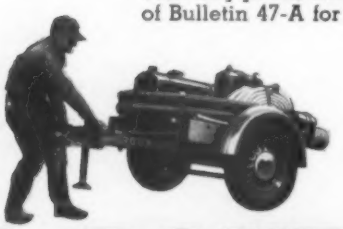
A NEW LABOUR FIRE TRAILER



with the famous SELF-PRIMING Centrifugal Pump

Delivering more than 150 gallons per minute against a total pressure of 110 lbs., this new Type WFI LaBour Fire Trailer incorporates an improved pumping unit driven by an air cooled engine. The pump is inherently self-priming, requiring no attention or manipulation whatever, and being of the centrifugal type with an open impeller, it is next to impossible to clog. Dirty water cannot injure the pump.

The unit can be quickly attached to any passenger car to be drawn to the fire. It carries 24 feet of suction hose and 500 feet of discharge hose, and is arranged so that one or two streams can be used. May be used as a booster from a hydrant or another pump, adding 110 lbs. to the pressure put into it, or will draft direct from any pond, stream or cistern. Send for your copy of Bulletin 47-A for full details.



LaBour Fire Trailers can be handled by one man when necessary. Pump and engine require no attention after starting, leaving man free to direct the stream.

LABOUR PUMPS

THE LABOUR COMPANY, INC., ELKHART, INDIANA, U. S. A.

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JUNE, 1941

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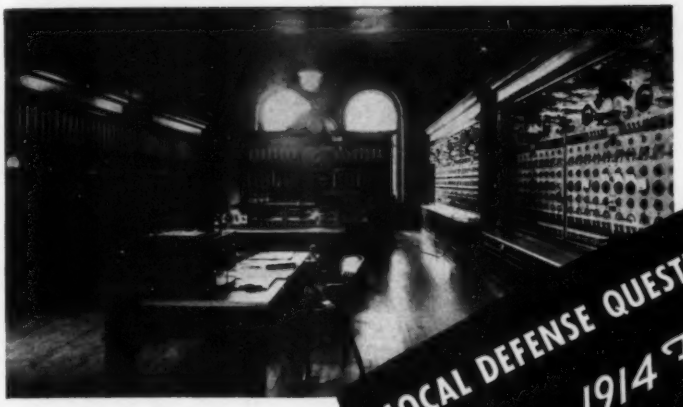

LOCAL DEFENSE QUESTION No. 1

Are We Trusting a 1914 Fire-Alarm System to Protect Our Community in 1941?

Here are 5 "reasons why" fire signaling systems deserve "priority" attention right now.

1. Industrial revival is putting old plants in your community into production, old furnaces into service, and shifting less experienced men to new duties . . . this means a greater likelihood of accidental blazes in industrial areas.

2. Many *new* plants and production facilities may be going up in your city, some involving work on combustibles. This means that new areas will require 100% protection.

3. Warehouses and commercial buildings may be housing materials of strategic importance . . . requiring extra security against accidental fires or sabotage.

4. Congested housing conditions may come with local industrial expansion . . . also new home-building in outlying areas. Both will call for improved, extended fire-alarm systems.

5. Today, equipment and installation personnel are available for expanding or modernizing fire-alarm signal systems, but emergency factors may limit their availability later on.

Meet today's more critical needs with specialized GraybaR service on municipal fire alarm problems

Whether your signaling problem involves the installation of an entirely new Central Office system in a metropolis, or the purchase of a couple of extra boxes for use on an outlying street five blocks east of Main, you'll get a double assurance of value by solving it the GRAYBAR way.

1. The known dependability and engineering superiority of GRAYBAR-distributed equipment, such as Horni alarm systems and Teletype equipment for fire department communication;
2. The scope of GRAYBAR service on related supplies, and the competence of GRAYBAR specialists in helping you plan a system exactly fitted to local requirements.

Better check with your local GRAYBAR representative today. Or, write for details on Horni equipment to meet any municipal fire-signaling requirement. Graybar Electric Co., Graybar Bldg., N. Y.

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HORNI Fire Signaling Systems
TELETYPE Fire Alarm and Police Communication Systems
GENERAL ELECTRIC Traffic Signals
KARPARK Parking Meters
WESTERN ELECTRIC Police Radio
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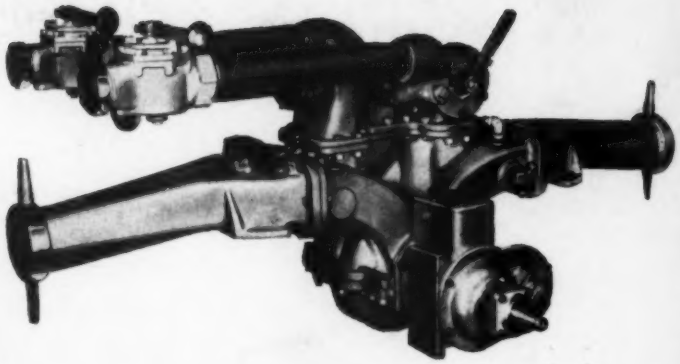
GraybaR — Everything Electrical — GraybaR ELECTRIC COMPANY

It will help if you will mention FIRE ENGINEERING *when writing advertisers*

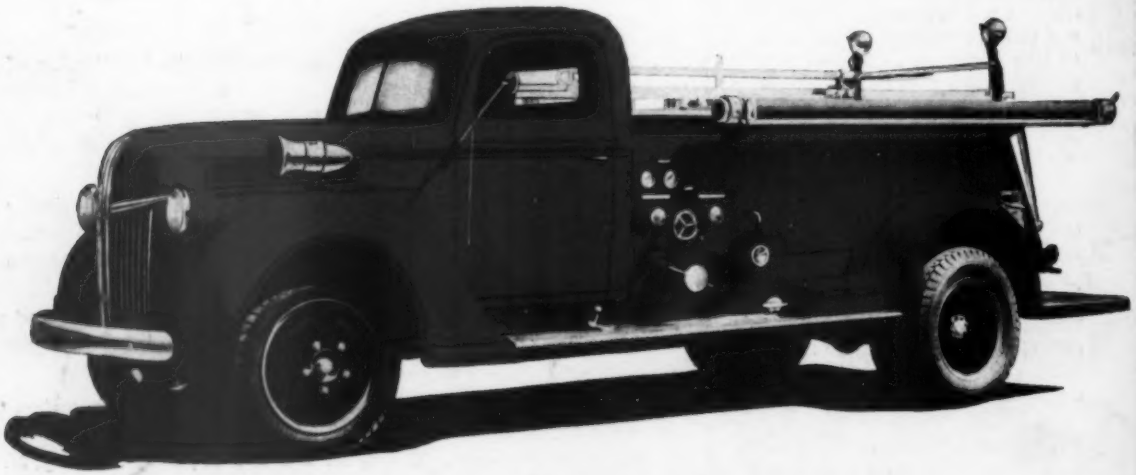
Now

THE CENTRAFLOW PUMP



IS AVAILABLE EQUIPMENT ON YOUR SELECTED COMMERCIAL TRUCK CHASSIS. THE ADDITION OF THIS MODEL TO OUR LINE OF FAMOUS CENTRAFLOW PUMPS MAKES AVAILABLE THE SAME FEATURES ONLY FOUND HERETOFORE IN LARGE CAPACITY PUMPERS.

- Direct in the line of drive—no pump transmission.
- Full Ball Bearing construction—no plain bearings.
- New type packing—will not dry out and has automatic adjustment for wear.
- Not necessary to maintain separate priming pump.



The fire fighting equipment on this 1941 Ford includes the

CENTRAFLOW PUMP

AMERICAN-LAFRANCE-FOAMITE CORPORATION

ENGINEERS and MANUFACTURERS

ELMIRA, NEW YORK, U. S. A.